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Illinois State Medical Society.

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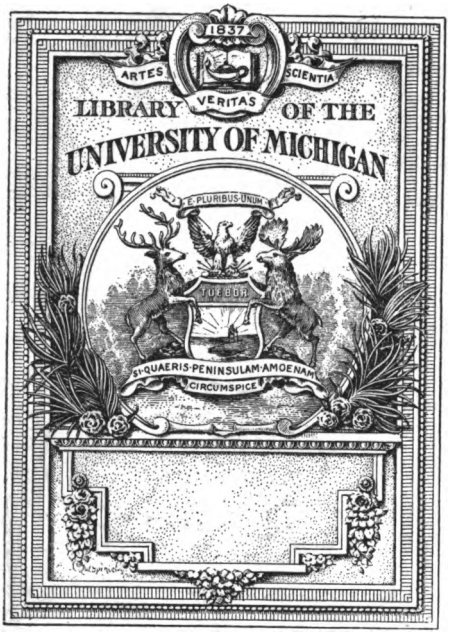

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TRANSACTIONS

OF THE

TWENTY-SEVENTH ANNIVERSARY MEETING,

OF THE

Illinois State Medical Society,

HELD IN THE

CITY OF CHICAGO, MAY 15, 16 AND 17, 1877.

CHICAGO:
A. S. KISSELL & CO., PRINTERS,
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1877.

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DELEGATES PRESENT.

Society of Macoupin County for Medical Improvement.

J. P. MATTHEWS,
M. W. SEAMAN,
W. J. HARRIS,
MRS. DR. CARR,
J. R. LANE.

Jersey County Medical Society.

JOHN S. WILLIAMS,
J. S. GILL.

Woodford Co. Medical Association.

J. W. WHITMIRE,
J. S. WHITMIRE.

Southern Medical Association.

DAVID S. BOOTH.

DeWitt County Medical Society.

JOHN WRIGHT,
W. H. TYREE.

Aesculapian Medical Society of Wabash Valley.

W. H. MCNARY.

Green County Medical Society.

L. A. BREWSTER,
W. H. VEATCH.

McLean County Medical Society.

J. L. WHITE,
T. F. WORRELL,
MRS. E. A. SHAW.

Central Illinois Medical Association

W. L. POLLOCK,
E. W. GRAY,
E. WENGER.

Military Tract Medical Association.

J. F. TODD,
A. E. GOODWIN.

Marshall County Medical Association.

I. H. REEDER.

Kankakee County Medical Society.

E. B. SHUMWAY.

North Central Medical Association.

D. L. WOODS.

Fox River Valley Med. Association

A. HARD.

Peoria County Medical Society.

G. L. CORCORAN.

Champaign County Med. Co.

S. H. BIRNEY.

Delegates from the Chicago Society of Physicians and Surgeons:

I. N. DANFORTH,
C. T. FENN,
C. T. PARKES,
D. A. K. STEELE,
J. H. HOLLISTER,
C. P. SIMON,
S. J. JONES,
THOMAS BEVAN,
JOHN BARTLETT,
S. C. BLAKE.

Delegates from the Chicago Medical Society.

D. W. BROWER,
F. D. MARSHALL,
R. S. HALL,
S. D. JACOBSON,
HENRY HOOPER,
T. P. SEELEY,
E. W. LEE,
A. H. TAGERT,
JOHN HUTCHINS,
JOHN C. WEBSTER,
JOHN R. BUCHAN,
ROSA H. ENGERT,
ROSWELL PARK,
E. GARRETT,
P. ADOLPHUS,
P. S. MACDONALD,
C. M. FITCH,
W. F. LEWIS,
HENRY VAN BUREN,
HARRIETTE BOTTSFORD.

Iowa State Medical Society.

W. F. PECK.

Rockford Medical Society.

W. H. FITCH.

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PERMANENT MEMBERS PRESENT.

N. S. READ, Chandlerville, Cass Co.
NEHEMIAH WRIGHT, Chatham, Sangamon Co.
ALEX. FISHER, Chicago, Cook Co.
E. L. HOLMES, " " "
C. W. EARLE, " " "
J. N. HYDE, " " "
J. V. FRAZIER, Viola, Mercer "
J. LITTLE, Bloomington, McLean "
JANE E. WALTON, Chicago, Cook "
O. W. MOON, Braceville, Grundy "
W. W. MCMANN, Gardiner, " "
ELLEN A. INGERSOLL, Canton, Fulton Co.
S. J. JONES, Chicago, Cook Co
R. G. BOGUE, " " "
T. D. FITCH, " " "
W. L. RANSOM, Roscoe, Winnebago county.
D. W. GRAHAM, Chicago, Cook Co.
EDWIN POWELL, " " "
H. A. JOHNSON, " " "
LESTER CURTIS, " " "
R. L. LEONARD, " " "
E. F. INGALS, Chicago, Cook "
W. P. PIERCE, Lemont, " "
J. P. WALKER, Mason City, Mason county.
J. W. SPEER, Mason City, Mason county.
P. H. BARTON, Danville, Vermillion county.
S. B. HAWLEY, Aurora, Kane Co.
E. INGALS, Chicago, Cook "
D. S. JENKS, Plano, Kendall "
B. M. GRIFFITH, Springfield, Sangamon county.
E. P. COOK, Mendota, La Salle Co.
J. S. GILL. Oak Grove, McLean "
M. W. WALTON, Ridotte, Stephenson county.
C. T. WILBER, Lincoln, Logan "
N. S. DAVIS, Chicago, Cook "
J. O. HAMILTON, Jerseyville, Jersey county.
R. J. PATTERSON, Batavia, Kane county.
SARAH HACKETT STEVENSON, Chicago, Cook county.
R. C. HAMILL, Chicago, Cook Co.
G. C. PAOLI, " " "
E. P. B. WILDER, " " "
E. ANDREWS, " " "
PLYM S. HAYES, " " "
J. S. JEWELL, " " "
C. C. HUNT, Dixon, Lee "
J. L. KITCHEN, Wyanet, Bureau "
J. M. STEELE, Grand View, Edgar county.
J. H. ETHERIDGE, Chicago, Cook county.
WM. E. CLARKE, Chicago, Cook Co.
F. C. HOTZ, " " "
WM. E. QUINE, " " "
MRS. P. A. KENT, " " "
N. N. HURST, " " "
JOHN E. OWENS, " " "
WM PARSONS, " " "
A. H. THOMPSON, Princeton, Bureau county.
J. M. TOPE, Jefferson, Cook Co.
W. T. MONTGOMERY, Chicago, Cook county.
W. H. MONTGOMERY, Chicago, Cook county.
J. L. HAYS, Paris, Edgar county.
W. L. GOODELL, Effingham, Effingham county.

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PROCEEDINGS.

The Twenty-seventh Annual Session of the Illinois State Medical Society was held in the Grand Pacific Hotel, Chicago, May 15th, 16th, and 17th, 1877. The President, T. D. FITCH, M. D., called the meeting to order at 10 o'clock, A. M. Prof. J. H. HOLLISTER offered prayer.

Drs. J. O. HAMILTON, T. F. WORRELL, and H. A. JOHNSON, ex-presidents of the Society, being invited by the President, took their seats on the platform.

Dr. J. N. HYDE, Chairman of the Committee of Arrangements, delivered an address of welcome, substantially as follows:

MR. PRESIDENT AND GENTLEMEN OF THE ILLINOIS STATE MEDICAL SOCIETY:

I learn that it becomes my duty as Chairman of the Committee of Arrangements, to extend to such of you as are non-residents of the city, the greeting of the medical profession of Chicago.

While I am sure that there are many of our number, who could in a far more acceptable manner discharge this agreeable duty, I am equally convinced that there are few who could not find occasion for congratulating you upon an occasion like the present.

We meet together at an hour when there comes to us across the Atlantic the echo of the tread of advancing armies. We assemble at a time when the nations of the Old World are agitated with war and the rumor of war, but we find our own beloved country enjoying the blessings of a profound peace. But a few weeks ago, the submarine cables which unite us to the shores of Europe, announced that a Russian General was prepared to sacrifice 30,000 human lives, if necessary, in order to effect the passage of the Danube. What a bright contrast is

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presented us between the avowal of such a purpose and the express object which calls us together! It is the glory of the profession which we have embraced that its highest aim is the conservation of human life. It is ours—not merely to study the phenomena of disease; not merely to read in the bodies of the dead the baleful record of the maladies which destroyed them, but to investigate the measures by which the lives of our fellow beings may be surrounded by safeguards against illness and accident, and by so doing to prolong them. Thackery once stood behind a grenadier of the Guards when the Queen of England was passing in front of them, and because the big hat of the soldier interfered with a view of Her Majesty, he protested that the student of history had always found the big hat of the soldier obstructing his view of passing events. Such an impertinent interference can never be charged against science. In order to view the royal source of power and law, it has been for centuries removing the obstructions interposed in the name of authority and precedent. Not with the bayonet and sword, but with the microscope and the thermometer, it has advanced to conquests that have brought blessings upon the race.

Three years have passed, gentlemen, since we had last the pleasure of welcoming you in Chicago. During that time many changes have occurred in our midst; but, I feel assured that I express the sentiment of my colleagues, when I say that you will find us unchanged in our desire to extend to you a most cordial greeting. You will find that since you were with us, our ranks have been reinforced by the advent of younger men who have added to our numerical strength and our resources. Among some of us you will note that sprinkling of grey among darker hairs, which is supposed by the laity to be accompanied by an increment of experience and wisdom. And such we trust you will find to be the truth. But among those whom we are proud to look upon as the veterans of the profession, I am sure you will look in vain for any evidences, that they have lost either their well-known vigor or skill.

One of them—an honored member of this society, whom you had doubtless learned to love and respect—has recently gone to his rest—Joseph Warren Freer, late President of Rush Medical College. You will doubtless hear from worthier lips than mine

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an expression of the grief that we felt when we first learned of our loss. I feel my inability to frame in words a fit tribute to the worth and purity of his private character, to the rugged simplicity and directness of his methods, to his hatred of everything superficial and false, and to the fullness and ripeness of his professional success. Like the immortelles which the French people lay upon the tombs of their dead in the cemetery of Pere la Chaise, his friends and colleagues have tenderly strewn his grave with their testimonials of affectionate recollection.

But other changes have occurred in our midst. Unlike the man in the Scripture who pulled down his barn in order to build a greater, Rush Medical College has left its old barn standing on the South Side, and has erected upon the West Side a structure which is a credit to the faculty of that institution, and one in which the profession of the Northwest may well take pride. You are invited to visit this, as well as the newly-erected Cook County Hospital, in its immediate vicinity. The Chicago Medical College, and its immediate neighbor, the Mercy Hospital, you will find dressed in their old clothes, and ready to receive you. Still nearer are St. Luke's Hospital, and the Chicago Academy of Sciences, which we shall be pleased to have you visit. The Library of the Medical Press Association, within a block of this building, is the nucleus of what we trust will one day become a flourishing institution. Its possessions are the exchanges and books for review sent to the *Chicago Medical Journal and Examiner*—the union of the old *Medical Journal* and *Medical Examiner*, now issued by the Association. I will say, in praise of that periodical, that it probably has more editors to the square inch, than any other similar journal published in the country!

Two other medical organizations—the Chicago Medical Society, and the Chicago Society of Physicians and Surgeons—as the representatives of the profession of the city, request me to invite you to be their guests at a banquet to be given in this hotel to-morrow evening. I can only say, that I trust this may be as happy an occasion as that of the 20th of May, 1874.

But, gentlemen, I was told to welcome you to Chicago. I suppose you know enough of our city to be assured that, what-

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ever may be the faults of its residents, they are not given to exaggerating the merits of the town! At a time of unparalleled financial depression, Chicago has enjoyed a degree of prosperity which seems to be almost exceptional elsewhere. And in that prosperity, as well as the prosperity of the Northwest, we, as medical men, cannot but feel interested. It may be true, that "the blood of the martyrs is the seed of the church"—that religious sects flourish best when poor and persecuted, but it is certain that medical science produces its best representatives, and its best results, when commercial enterprises are being floated on to prosperity by the swelling tide of trade. Just in proportion, gentlemen, as the grain fields of Illinois are heavy with rich harvests; just in proportion as manufactures and industries are pushed to success in the large metropolitan cities, not only will the medical man reap the just reward for his labor, but—what is of far greater importance—capital can accumulate a surplus which can be devoted to the foundation of our large public and private charities, and the endowment of our institutions of learning. I wish that I could quote exactly the words used by Dr. J. Marion Sims, in his late address before the American Medical Association. Said he: "What greater thing could a rich man do, for his country, for education, for humanity, for science, than the endowment of some great medical university which might overshadow the private corporations which are in such active competition with each other?"

For what has been done, and for what is now doing, we have reason to be thankful and proud. At the time of the recent opening of the English Parliament, we learn that in accordance with long-established usage, one dozen good and true yeomen, with flaring torches in their hands, explored every nook and corner of the basements of the old Parliament houses, in order to be assured that no descendants of Guy Fawkes were there secreted. So, gentlemen, before we meet here to-day, our predecessors have explored the foundations upon which the superstructure of our science rests; but, unlike the yeoman of the guard, they were not seeking for foes, but for facts. Searching for the truth, Malgaigne, the philosopher, counted to be greater happiness than even to be in possession of the truth itself.

Whether he were right or wrong, I congratulate you upon

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assembling with an object in view so ennobling that both search and possession have equally their reward.

At the conclusion of his remarks, Dr. Hyde, on behalf of the Arrangement Committee, submitted the following order of exercises:

1. Call to order by the President.
2. Report of Committee of Arrangements.
3. Reception of members by invitation and reading of letters from absentees.
4. Calling lists of standing and special committees, and fixing the time of hearing their reports.
5. Calls for volunteer papers, and fixing time for hearing them.
6. President's annual address.
7. Election of permanent members on recommendation of Committee of Investigation.
8. Selection of Committee on Nominations on morning of second day.
9. Miscellaneous business.
10. Reports of committees on nomination, election of officers, committees, delegates to medical societies, and selection of place of meeting.
11. Adjournment.

Wednesday morning session from 9 A. M. to 1 P. M.; afternoon session from 2:30 to 6 P. M. Thursday morning from 9 A. M. to 12 P. M.

A banquet will be given at 7 o'clock Wednesday evening, at the Grand Pacific, tendered by the medical profession of the City of Chicago.

Dr. J. L. White. of Bloomington, on behalf of the Society. spoke in response as follows:

MR. PRESIDENT.

I have no response to make, except to thank you for the very cordial welcome extended to the members from abroad. It is, as has been very justly remarked by your chairman, pleasant to be a member of a society having for its object so good and use-

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ful a purpose, as has the Illinois Medical Society. To relieve the suffering of the distressed, and to prolong human life, is certainly worthy of the highest consideration, worthy of the best men of the age, much more to be desired than are honors and emoluments of war. The profession throughout this State feel an interest in Chicago. They are glad to come to Chicago, to meet in the sessions of this Society! Every one, I think, feels as I do, that he has an individual interest in this city, whether living here or not. The knowledge, the enterprise, the pluck which has been displayed here, and which has given to Chicago the fame she enjoys, that has made the city hardly equalled by any other city, either in our own or in foreign countries, is a part of the State property. It is something that every resident of the State, as well as every resident of the city has a right to feel an interest in, and feel proud of.

The part which the physicians of Chicago have taken, in giving to the city the reputation she enjoys, in this respect, is also the property of the physicians throughout the length and breadth of the State. We all felt as deeply, as any of you could feel, the loss of Dr. Freer. He was admired, respected and beloved, I believe, by every physician in this State—all deeply mourn his loss.

We all take an interest in the prosperity, and in the reputation of the physicians of Chicago. Some of you have reached a point in scientific attainments that is equal to that of the profession in the larger cities in this country; and, in fact, you occupy positions that command the respect of the profession in the Old World. We are proud that we belong to a State having physicians who enjoy the reputation that many of you enjoy.

We thank you gentlemen, for the generous hospitality you have extended to us, for the banquet promised to us. We know that you partake of the surroundings of your city, as every one is more or less affected by his surroundings, and we are glad, gentlemen, to be the recipients of your bounty. [Applause.]

Dr. Hyde.—Chairman of the Committee of Arrangments, said he had omitted to make an important statement, which was that the proprietors of the Grand Pacific Hotel had kindly consented to invite the Society to occupy their parlors during its session in Chicago, and also had

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offered to the delegates from abroad reduced rates to such as desired to become guests in the hotel.

The President remarked that it would be observed that no time had been appropriated by the Committee of Arrangements, for visiting the public institutions of the city. What would the society do with the report.

Dr. Walker moved that the report be received.

Dr. N. S. Davis said he thought the motion ought to be to adopt the essential portion of the report of the Committee of Arrangements, especially so far as it related to the hours of business. Members could visit the public institutions when they pleased, and they would find somebody to show them around. It would be impossible to do more, unless the Society should devote a day to the purposes of visiting. If the report of the Committee of Arrangements should be adopted, it would be impracticable to set apart any time to go to the parks or hospitals, unless it should be Thursday afternoon. The Committee of Arrangements did not feel justified in recommending the taking out of half a day for junketing about the city. If members should see fit to protract their stay, so as to go to the institutions on Thursday afternoon, there was no doubt that every one of these institutions would be glad to make arrangements to meet the members at that time.

Dr. Hyde.—I can only say that Dr. Davis has, in the fullest manner, reflected the sentiment and opinions of the Committee of Arrangements. It was not without discussion that no definite time was given for visiting the various institutions of the city. The committee felt that if the Society desired to adjourn to visit, as a body, any of the institutions of the city, it was in their power to do so. The committee did not feel inclined to make any such arrangements, especially as they were given to understand that the managers of the medical schools, hospitals, etc., would be ready to receive any membors of the State Society at any time during the day, and particularly during the evening.

The President ruled that any further discussion of the motion under discussion was out of order. The discussion of the merits of the question was only allowable, upon a motion to adopt the report of the Committee of Arrangements.

Dr. N. S. Davis moved, as an amendment to Dr. Walker's motion, that the report be received and adopted. The motion prevailed.

The President announced that he had just received a note from the President of the Medical Board of the Cook County Hospital, inviting the members to visit that institution.

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The Secretary read a note from Dr. C. F. Barnett, of Bunker Hill, offering to withdraw from the possession of the Board of Censors, charges preferred by him against the Macoupin County Medical Society. It was referred to the Board of Censors.

The Secretary announced that he had in his possession a letter from Dr. J. F. Thomas, of Chillicothe, Ill., announcing the death of James M. Allen, M. D., with a brief obituary sketch. Referred to the Committee on Necrology.

The next business in order being the call of the Standing and Special Committees, in order to fix the time for hearing the reports, the Secretary, Dr. N. S. Davis, read the list of committees, and they were disposed of as follows:

Committee on Practical Medicine was made the order for 3½ P. M., Tuesday afternoon. The report of the Standing Committee on Surgery, Dr. J. L. White, Chairman, was ordered to follow the discussion which might take place on the report on Practical Medicine.

The report of the Committee on Drugs and Medicines, Dr. Griffith, Chairman, with a paper by Dr. Ransom, was placed at 10 o'clock A. M., on Wednesday.

The report on the Diseases of Children, Dr. Earle, Chairman, was set for 11½ A. M., Wednesday.

The Committee on the Dietetics and Hygienics of Children, Dr. J. H. Hollister, Chairman, was made the special order for 2½ P. M., Wednesday.

The Secretary announced several volunteer papers, as follows: Prof. Andrews, of Chicago, has a short paper, giving an explanation of a new Extension Splint for Chronic Inflammation of the Ankle Joint. On motion of Dr. N. S. Davis, it was placed to follow the report of the Committee on Surgery.

The same gentleman offers to read a paper on Drainage Tubes and Antiseptic Injections for the Treatment of Empy-

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æmia, illustrating it by the presence of a patient. It was made the order of business for 3½ o'clock on Wednesday.

Dr. Davis presented a paper prepared by Dr. A. C. Corr, of Carlinville, which was referred to the Committee on Surgery.

Dr. J. S. Jewell announced that he had a paper, which he would present if opportunity should offer. It was a paper on certain researches upon the Action of the Nervous System upon the Nutrition of the Body. On motion of Dr. Davis, it was placed for 10 o'clock, Thursday morning.

Dr. J. S. Whitmire, Chairman of the Special Committee on the action of gelseminum, stated that he was unable to make his report at the present session. On motion, the committee was continued, with request to report next year.

Dr. Edmund Andrews stated that perhaps he could give some account of his treatment of empyemia this afternoon, in connection with the report of the Committee on Practical Medicine, and instead of reading a paper, would say something in connection with the discussion on that report. On motion, Dr. Andrews was invited to present the subject as he suggested.

The Assistant Secretary, Dr. Earle, read the names of Drs. James H. Bates, C. H. Lovewell, A. H. Foster, W. G. Dyas, who were recommended for membership. They were referred to the Board of Censors.

The President stated that Dr. Gill, of Jerseyville, a member of the Board of Censors, would not be present. He suggested that some one would be chosen to fill the vacancy. On motion, Dr. J. L. White was chosen to fill the vacancy.

The President suggested that if any one had any objections to a person proposed for membership, he should state his objections to the Board of Censors.

The Assistant Secretary, Dr. C. W. Earle, reported that Dr. S. O. Richards was nominated for membership. Referred to the Board of Censors.

The President announced that persons who were attending the Society, as delegates from local societies having paid their dues, were permanent members, requiring no other proceeding to constitute them full members of the Society.

A member inquired what the dues were.

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The President said that all new members are required to pay two dollars as an initiation fee, besides the ordinary assessment. The permanent members are expected to pay the assessment.

Dr. J. H. Hollister said: A rule was made two years ago, that until otherwise ordered, the annual dues should remain at three dollars a year. It has been the rule of the Society, that whenever an individual became a member, he should pay the initiation fee and the annual dues. It has never been different whether the man was a delegate or a member received in the ordinary way.

Dr. Hyde, Chairman of the Committee of Arrangments, reported in detail, the localities of the several hospitals and other institutions of Chicago, to which the members have been invited. Dr. Hyde stated that he had been unable to obtain any discount from the regular railroad rates in any case.

The President, Dr. T. D. Fitch, then read his annual address as follows:

LADIES AND GENTLEMEN OF THE ILLINOIS STATE MEDICAL SOCIETY:

One year ago you conferred upon me with flattering unanimity, the highest honor in your gift. For this expression of your confidence and esteem, I most profoundly thank you. And now as I come to assume the duties of the office of President of this Society, I hope and expect that I shall have your most cordial co-operation in the conduct of the proceedings of this session, that we may all feel when it shall draw to a close that it has been good for us to have been here.

By a provision of our Constitution, Art. 2, Section 4, it is made the duty of the President, in addition to the ordinary duties of that office, to deliver an address.

In conformity to said provision, I propose to make a few practical suggestions:

1st. I desire to call your attention for a few moments to the advantages of organized effort.

At the organization of our Society, in the city of Springfield, in the year 1850, the following preamble was adopted; viz., "Inasmuch as an institution so conducted as to give frequent, united, and emphatic expression to the views and aims of the medical profession in this State, must at all times have a beneficial influence, and supply more efficient means than have

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hitherto been available here, for cultivating and advancing medical knowledge—for elevating the standard—for promoting the usefulness, honor and best interests of the medical profession, for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men, for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it."

From this preamble it will be seen that the advantages may be classified under three distinct heads; viz., Political, Scientific, and Social.

Irwin says: "Citizenship under a good government, well administered, has always been regarded as a boon greatly to be prized." Examples are not wanting, either in sacred or profane history, where the protection of citizenship has prevented insult and warded off injustice and outrage. The great apostle (*Paul*) to the Gentiles, before the Roman court, found it necessary to take refuge behind this ægis, when he demanded of that court whether such an outrage had ever been known as to scourge a *Roman* citizen, being uncondemned.

The assertion of citizenship in imperial Rome, was an adequate protection from wrong the world over, when that proud city was in her glory. Invasions of the rights of a citizen, he being part of the body politic, is regarded as an insult to the sovereignty of a nation.

Thus it is with citizenship in our Society; a membership makes the weak strong, and the strong, stronger. It is or should be a voucher for one's good standing in the profession. Since diplomas from medical colleges are becoming less valuable as testimonials of a physician's qualifications to practice his profession, our medical societies should be the umpires, and guard with more care the portals of their sanctuaries, so that none unworthy shall gain admission, and all unworthy within its folds be cast out.

It should be the duty of graduates from our medical colleges to connect him or herself with some medical society.

I hold it to be the duty of every medical teacher, especially every valedictorian, to forcibly impress this necessity on the minds of his students, indeed, I am not sure but the validity

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and perpetuity of their diplomas should be conditioned upon their fully indentifying themselves with the profession, by connecting themselves with some medical society. I am not sure but that an oath of the Hippocratic type would be a good thing.

If no society exists in his own town or county, let him go to the nearest organization, until he is able to establish one in his own immediate locality. He needs the help of such influences, not only in times of adversity, but in times of prosperity; in the latter, that he may be prepared for the former. How often do we see men of ability entirely ignore (for some petty reason) all societies, and sometimes all other physicians, when in their prosperity, but as soon as adversity comes in the way of prosecution for malpractice or sickness and impoverishment, fly to the very men or societies they have abused, for relief. This is no imaginary thing. No creature of the fancy, but an actual fact, which I have repeatedly seen, and I am sure that your own observations will attest the truthfulness of my statement.

We not only want this Association for mutual protection against the wiles of our adversaries, but that we may be made brighter and better practitioners.

It may be safely asserted that what is good for us, as individuals, is for the benefit of the whole profession, of which we form a part.

Unquestionably it is our duty to offer no unreasonable opposition to well-considered projects for the elevation of the profession in public estimation.

The dispelling of ignorance means the saving of life, having that end in view, we can hardly fail to do what is right and what is best.

United we stand, divided we fall; in union there is strength; in division, weakness.

> "Like clocks, one wheel another on must drive,
> Affairs by diligent labor only thrive."

There is scientific work to be done, and knowledge to be gained, which can best be done by joint labor. Each physician is so intimately connected with another scientifically that serious loss is suffered, if but imperfect communication be promoted

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between them. Woe! to that man who, while journeying his own way though apparently advancing, forgets to make use of the discoveries of his fellows.

Our Society may be likened to a hive of bees. Each bee goes out and gathers the sweets from various flowers, and brings them to the hive devoted to the common stock. Let us then individually as workers go to our various fields of practice and gather the sweets in the form of valuable facts, and bring them into this Society as the hive for the benefit of all.

Bee-keepers tell us that when the drones become too numerous in the hive, the working bees seize them, one at a time, and drag them to the edge of the platform on which the hive stands, and then, after taking the precaution to tear their wings, so they cannot fly back, they push them off as worthless members of the family. "If there was any way," says Whitney, "by which such a result could be attained in the medical family, it would lighten the burdens of the workers, and confer a blessing on the profession."

It is incumbent upon those who enter the medical profession to devote their time and their talents, to make themselves worthy their high vocation. He who takes upon himself the duties and responsibilities as well as the honors which attach to his office as physician, is sacredly bound to give himself honestly and industriously to its work, he who fails of this, deserves the execrations of the community whose confidence he may have gained.

The young physician who goes out into the world to practice his profession is full of scientific theories, familiar with the microscope, stethoscope, endoscope, laryngoscope, ophthalmoscope, and every other scope but a full scope of valuable clinical experience. He is ready to cut for stone, amputate at the hip joint, to perform tracheotomy, ovariotomy, and every other 'otomy except the appeal O!-to-me give wisdom, discretion, and prudence, which is only gained by careful clinical study, and close observation of cases for a series of years. He is apt to regard the old physician as an old fogy, whose knowledge of anatomy, physiology, pathology, recent investigations, and operations, is probably limited, while his store-house is filled to overflowing with valuable experience, which enables him to treat the ordi-

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nary diseases of the country with far greater success than this brilliant, new-fledged M. D.

Not unfrequently the old man, appreciating all the discoveries, and seemingly miraculous operations of the day, feels ashamed of his easy, contented, grasshopper life, and its cheap and insignificant successes, sinks into silence, telling himself, humbly, that in these times, when knowledge of physics, physiology, anatomy, and chemistry, has so amazingly increased, a man like himself ought not dare, even to speak out bravely before those brilliant young fellows who, with perfect ease, carry about such a burden of knowledge as would make him stagger even to think of it. Yet having a secret assurance, that after all, the dogmatic conclusions of science, the light thrown upon many of the terrible problems of vital importance to humanity, is about as efficacious in illuminating the deadly dangers which lurk in seats of disease and pain, as the hand-lamp is successful in dispelling the shadows of the wild chaos of stormy midnight.

The young man, on the other hand, seems to have as good an opinion of the brains of the scientific analysts who draw with such intelligence and exactness their adroit deductions, as of the great Originator and Inspirer of all the forms of life which swarm upon the earth.

Now, these acquirements are all valuable. The young man needs the old man's practical, while the old man needs the young man's theoretical knowledge. This exchange can be made through the medium of friendly relations and medical associations.

The most obscure physician in the State owes it to himself and his patients, to put himself in the way of receiving these benefits: 1st. The local society; 2d. The State society; 3d. The American Medical Association should be the grand highway to medical knowledge.

As the Jews annually went up to Jerusalem not only to be taxed, but to bring the best of their flocks, and first of their fruits, and to receive inspiration from on high as they worshipped in the temple, so should every physician in our State, come up annually to this medical Jerusalem with the best of his fruit, to be taxed, to give out to his fellows his valuable experience, and to receive from them, in return, valuable information and fresh inspiration for greater work.

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Bacon says: "I hold every man to be a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty, to endeavor themselves, by way of amends, to be a help and ornament thereunto."

It has been said, that the life of a man should be reckoned rather by the work he has done, than by the number of his days. The same is true in reference to a society like ours.

Sir Thomas Brown says: "He that early arriveth into the parts and prudence of age, is happily old without the uncomfortable attendance of it, and it is superfluous to live unto *gray hairs*, when in a precocious temper we anticipate the virtues of them." Can this be said of us? The answer we need not leave to others.

> We would not waste our spring of youth,
> In idle dalliance; we should plant rich seeds,
> To blossom in our manhood, and bear fruit
> When we are old.

Our society has not been one of the sluggards, for which let us congratulate ourselves. It did not waste its spring of youth in idle dalliance, but planted early rich seeds in congenial soil, which in its age is bearing much fruit to the honor of our profession and our noble State.

It was one of the first societies organized in the West, with our much lamented Prof. Wm. B. Herrick, of Chicago, its first President, and Edwin G. Meek, of Chicago, and S. A. Paddock, of Princeton, its Secretaries. Numbering among its first members such men as Daniel Brainard, Wm. B. Herrick, J. V. Z. Blaney, John Evans, N. S. Davis, and Edwin G. Meek, of Chicago, and the venerable Rudolph Rouse, of Peoria; Robert Boal, of Lacon; John A. Halderman, of Carlinville; Thompson, of Albion; Henry, of Springfield, and other eminent members of the profession in our State—of whom a few yet survive—Prof. N. S. Davis, who has done more to perpetuate the Society than any other man, Gov. John Evans, of Colorado, and Robert Boal, of Peoria, in whom the Society has ever found a warm and supporting friend.

While much has been done to advance medical science, and to disseminate a friendly and cordial feeling among the members of the profession in our State, and to place the Society in an enviable position among its peers, much more could and should

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have been done in this direction. When we realize that out of a profession in the State numbering about 5,000, only an average membership of 253 has participated in its deliberations during the past ten years.

The social element in our natures requires cultivation, and the benefits to be derived from it requires but a passing notice, as they are familiar to you all. However, we may say, it is profitable to cultivate, conducive to health and longevity. We may say, that to know our brethren in the profession is to love them, while not to know them is to distrust them. It is true that there are exceptions to this rule, as there are exceptions to all general rules. In this case, however, the exceptions are rare. This is exemplified in the difference between the relations of city and country physicians. In cities there is a remarkably friendly and reciprocal feeling existing, while in the country it is not uncommon to find quite the contrary state of things. However, I am satisfied that as medical societies increase, the bond of union becomes stronger, and less ill-feeling, strife, and discord exists. I speak somewhat from experience and observation in this matter, as my professional life has been about equally divided between the country and city.

The social advantages which may be derived from our medical societies is of inestimable value. Isolation is an unnatural and ungodly condition. The man who ignores the social want of his nature, robs his life of fully one-half its heritage. More than ordinary mortals does he need the healthful, useful influences which come from participation in social pastimes, and which our annual gatherings so richly afford. In this respect, we hope to make our present meeting one of the most enjoyable and profitable.

We sincerely hope that every one of you will take from this place a heart full of good-fellowship.

If any one of you has been living in a shell, we hope that during this meeting it will be so thoroughly overgrown and cast off as never again to be occupied. The human being has no right to take on the crustaceous form. It is anti-revolutionary. The only time we have any right to a shell, is when it is filled with delicious fruit in the shape of a Saddle-Rock or New York Count.

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We take it that one of the greatest, noblest purposes of this Society, is to bring us from our separate and isolated ways and teach us the beauty of that sacred truth: The universal brotherhood of man.

With this much in regard to our social element, we will pass to the consideration of some of the obstacles to our more perfect success, as a Society, together with other subjects of general interest to our brotherhood, I desire to suggest that the present mode of receiving and deposing members of our Society, is objectionable.

Members are constituted in two ways; 1st, by attending as delegates from other societies and institutions; 2d, by being proposed by two members, investigated by the Board of Censors, and no its recommendation elected in the presence, or absence of the person so recommended.

Members after paying one assessment, are retained on our books, without further payment of dues for five years.

As our Society is a representative body, its membership should be confined to delegates from auxilairy bodies or subordinate bodies. The bad effects of electing members has already been seen. Men are elected who never attend, are appointed on committees that never report; they are proposed through the influence of some friend. If there be any one to object, he may not be present, or if present, does not know his privilege and duty to appear before the committee and present his objections. The impracticability has been recognized and remedied in the American Medical Association by an amendment produced in that society in 1874, by our worthy Secretary, Prof. Davis. Again, it works injustice to local societies. A man may entirely ignore his local society, and become a member of the State society. I hold, according to an amendment introduced by myself in 1870, but defeated that no man should be received or retained a member of this Society, who is not a member in good standing in some subordinate organization. It may be said that this rule would work injustice to some poor physician who is the victim of persecution in his local society. This brings me to the suggestion that we should have the number composing the Board of Censors increased, so as to constitute an appellate tribunal to which all persecuted individuals may appeal; similar in charac-

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ter to the judiciary committee of the American Medical Association. Now, I believe that the loose way we have of receiving members and of retaining them, depreciates very greatly the value of membership in this Society, as it does in all societies. The more stringent the rules of admission to membership, and retention to membership, the more valid and valuable will those memberships become.

It will be seen by reference to our list of members in the last volume of transactions, that a very small proportion of members pay their dues. A duty I hold to be more sacred than most any other duty of members. No organization can exist without material support, and certainly there is no member in this Society that is not able to pay three dollars per annum. He may say the Transactions are not worth the money; if not he should come up and help make them worth it, or that he was not present to hear and take part in the discussions. Whose fault is this? Our's or his? And indeed, if both these objections exist, is there not some value in his connection with such a society? These are not the reasons generally. It is an apathy, an indifference, a neglect. I hold there is no real excuse for this.

I am convinced that membership should not be perpetuated without payment of dues for a longer period than two years, and then the members should be dropped and never again permitted to regain their membership, without full payment of back dues, and a satisfactory apology or explanation to the Board of Censors, or the Society, for such delinquency.

By reference to the statistics it will be seen that our average membership for the past two years has been 253. Our average collections $349, being $1.38 per capita. In 1867, we had 175 members. In 1876, 370. In 1868 our collections were $368; in 1876, $597. Our financial condition as will be seen by the Treasurer's report is sound but not prosperous. Our relation to other societies is most amicable, communications and exchanges are held with nearly, if not all, of the societies in the country, and there is, in all respects, great deference shown to our Society.

Our reports and papers are very favorably received and reviewed by our Journalistic friends. The character of our transactions both as to scientific matters, and mechanical execution, is a cause of congratulation, and should stimulate us to greater efforts to make

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them worthy the commendation they have heretofore received. Our relation to the A. M. A. has always been of the most pleasant character till the past year, and I am quite sure that no cause of disturbance has ever been given, until the Illinois State Medical Society through its executive became the leader in a revolution which I hope and believe will be heartily sustained by the Society. It has been a standing rule of this Society for several years, that a delegate to the American Medical Association, being unable to attend, was duly authorized to appoint a substitute from the membership of this Society. In conformity to this rule, our lamented Prof. J. W. Freer, was solicited by myself to appoint as his substitute, Prof. Sarah Hackett Stevenson. Prof. Freer expressed great gratification on being privileged to appoint her as his substitute, and gave the certificate to her accompanied with a very flattering endorsement which I also endorsed as President of your Society. On arriving in Philadelphia, the Committee of Arrangements said, that all such cases would be referred to the Judiciary Council. Prof. Stevenson, not desiring to make herself prominent in a contest of the kind, decided not to take the step. The President (Marion Sims) in his address, which was received with great applause, gave utterance to the following sentiments: Now we are a truly representative body — made up of delegates from State and county medical societies, and we must of *necessity* receive such delegates as any of these societies, properly organized, may see fit to send us. If any woman entering the medical profession makes such a reputation and such position in the profession in her own State or county, as to be sent as a delegate to us from a State or county society we are *bound* to receive her.

After the earnest solicitation of the permament secretary to register Dr. Stevenson, we tried to find her but could not, and as it was necessary to register before the names were read, Prof. Byford and myself went to the registering committee, and gave her name in full and paid the fee. Some of the opposition said that it was underhanded, that had she appeared there in person that they could have recognized her sex—she could not have registered. Her sex was borne in her name and no effort was made to conceal it. On the following day the names were read

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to the Association in full for acceptance or rejection. When the Secretary read her name, he read it distinctly and repeated it. A motion was made by Dr. Brodie, of Detroit, to refer her name and all other questionable ones to the Judiciary Council. A motion was immediately made by Prof. Waterman, of Indiana, to lay the motion on the table, which was done by a very large majority with great applause. A motion then followed that the list of names, as read, be declared members of the Association, which was also carried with great applause. Let us congratulate ourselves that we possess the first woman delegate to the American Medical Association. Some may say that the President transcended his authority in approving and being instrumental (in connection with Prof. Byford,) in her appointment. In reply, I would ask if the rule has not been one of long standing? And if we have a member of this Society ineligible as a delegate?

It will be remembered that at the last meeting of the Society, a committee was appointed to memorialize the legislature on the subject of the appointment of a State Board of Health, and with proper modifications the Massachusetts Bill was to be taken as the basis for the Illinois State Board. The committee consisted of Drs. E. W. Gray, of Bloomington, Wm. M. Chambers, of Charlston, S. H. Birney, of Urbana, Wm. Massie, of Paris and F. B. Haller, of Vandalia.

I desire to say that much credit is due the chairman of this committee for his untiring zeal and many sacrifices made in the interests of this bill. Much credit is due to Drs. H. A. Johnson, John H. Rauch, John H. Hollister, and N. S. Davis, for their labors in the interests of this bill. I desire to say that on the request of Dr. Gray and some friends of mine in the legislature, after consulting with Drs. Johnson and Hollister, I issued a circular to the members of this Society (with the contents of which you are all familiar) signed by myself and Dr. Johnson, who is a committee of the American Medical Association for Illinois on State Board of Health. A very general and hearty response, I understand, was made, and I am informed that the missive was of substantial benefit. The bill is a very satisfactory one and stands, passed the House on the second reading in the Senate, with almost a certainty of its becoming a law.

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I have been solicited to issue a similar circular for a bill to regulate the practice of medicine in this State, but not being personally satisfied, with any of the bills I had seen, and not being the measure of this Society, I have not considered myself justified in such a proceeding.

The angel of death has not forgotten us, in his visitations. During the past year, he has removed from our Association, several of its fellows, among whom I desire to mention two who have died in our city; *viz.*, Prof. J. W. Freer and G. G. Gale. One year ago to-day, we had with us an exceedingly valuable member, in the person of Prof. J. W. Freer, who is no more, and I cannot do better justice to his memory, than to quote the obituary notice and resolutions adopted by the profession of this city, and published in the May number of the *Medical Journal and Examiner.*

My personal acquaintance with the departed was of the most cordial and pleasant character, extending over a period of more than a quarter of a century. I had the honor of attending his demonstration in anatomy, and listening to the first course of lectures he ever gave, which was given in the evening, in the old amphitheater of Rush Medical College.

Joseph W. Freer was born at Fort Ann, Washington Co., N. Y., Aug. 19, 1816, from Holland blood on the father's side, and from the English Puritans of New England on the mother's. He worked on his father's farm until his nineteenth year, acquiring during this time but the rudiments of learning. He then entered a store in a neighboring village, in the capacity of clerk. He remained here but a short time, and in June, 1836, he migrated to Illinois. Here he devoted himself to agriculture, making a claim on the Calumet river, not far from Chicago, but he was obliged to abandon it on account of sickness. He then opened a farm in Will county, Illinois, in which he was among the earliest settlers, where he remained until 1846. He was married in 1844. His wife died in 1845, leaving to him an infant son. He was dissatisfied with the medical treatment of his wife in her last sickness, and this circumstance made him determine to study medicine. With limited literary attainments, and with his hard preliminary experience in life, when thirty years of age, he made his way to Chicago,

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and placed himself as a private pupil in the office of Daniel Brainard. He was graduated from Rush Medical College in the class of 1848-'49. He again married in 1849, and leaves at his death his widow and four surviving children. Soon after his graduation, he was appointed demonstrator of anatomy in Rush Medical College, and when Professor Herrick retired from the chair of anatomy in 1855, Dr. Freer was appointed to his place. In 1859 he was transferred to the chair of physiology and military surgery. When Dr. Blaney resigned the presidency of the school during the winter of 1869 and 1870, Dr. Freer was elected to the position, which he held to the time of his death. At the close of the recent session of lectures in the College, he seemed enfeebled by the hard work of the winter. Soon after, he stood several hours in the dissecting room of the College, when it was imperfectly heated, giving his son instructions in dissection, and from this exposure he took a severe cold which sent him to a sick bed on the 1st of March, from which he passed to his final rest on the 12th of April following.

His symptoms indicated meningeal inflammation at the base of the brain, and the autopsy proved the accuracy of the diagnosis. Prof. Freer was a self-reliant man, of marked individuality of character. He held all sham and pretense, and falsehood in the garb of truth, in hearty detestation. His opinions of men and events were open to the world, and what he believed he feared not to utter. He made no great claims for himself, but was content to let his life speak for him. His mental qualities were solid and strong, but not brilliant. He had a clear judgment, and great perseverance, and viewing an object before him worthy to attain, he pursued it with a tireless purpose. He led a pure, temperate life of integrity, and was moved by worthy motives. He was sensitively honorable in his relations to the profession. He was honest with his patients, and gave to the consideration of their cases careful study and assiduous attention, and both in medicine and surgery was eminently conservative in his treatment, a practice which added largely to his usefulness.

Though he was always a laborious practitioner, he loved the science of his profession better than its practice, and this, doubtless contributed much to his attainments and success. As

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a teacher, he mastered his subject, and presented it in clear, simple forcible language, and never submerged his thoughts in superfluous words. He stood among the representative men of his profession in America, and his example is of great value to the young, and is abundantly worthy of their imitation, while to those who have long wrought well in the profession, it lends reflected honor. Such men add dignity to cities and States in which they labor, and any community that holds them in its midst may well give thanks.

Dr. J. W. Freer. A meeting of the physcians of Chicago was held on the evening of April 13, to pay their tribute to the memory of the esteemed late president of Rush Medical College. The following resolutions were adopted as expressing the sentiment of the profession:

In Memoriam—Joseph Warren Freer. Born Aug. 10, 1816. Died April 12, 1877.

His professional associates, townsmen and friends, meeting to pay their tribute of respect to his memory, and to express their sentiments of his life, after deliberation, have formally expressed, and desire to put on record, this estimate of his character, his life, and his services.

Reared amid the drudgery of farm life, and deprived of all but the most meagre education, Prof. Freer acquired early a love for knowledge, that made him always a learner for the sake of learning.

He honored the vocation of agriculture in his early years by his thrift and enterprise, and improved it by his study of its best methods.

When—late in life to begin the acquisition of a new profession—he took up the study of medicine, he gave to it that enthusiasm which he had learned to give to all study, and the vigor of a manhood made strong by toil and sobriety and self-denial. He remained a faithful, humble student through life.

As a student of medicine he was original, and he enriched the science of physiology by important discoveries. He attained a position in the profession which few may hope to attain, but his advancement was slow and came by hard work and faithful service. His contentment in earning a position, without grasping for it, and his high reward finally, furnish an example in the highest degree worthy of emulation.

In his college relations he was always warmly attached to his colleagues, and this feeling was heartily reciprocated. He was a hard-working teacher. He taught the facts of his branch with no attempt at flourish or embellishment, satisfied to let great principles be their own adornment. He was ever regarded with affection by his classes, who were wont to call him by some homely sobriquet of endearment.

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He was a man of few words, but his words were laden with thought. His speech was rugged, yet always fine and expressive in its vigor. In his opinions he copied from no man,—they were his own,—and in the expression of them, as well as in all the acts of his life, his courage was without weakness.

His loyalty to his friends was proverbial. He loved right, and was conscientious in the performance of what he regarded his duty. If he hated anything, it was wrong, and if he were unrelenting toward anything, it was toward what he believed to be wrong action on the part of those who knew the right.

An exemplary citizen, a dignified, courteous gentleman in his daily life; in his domestic life beyond reproach; a man of high attainments in his profession, and who has rendered fine service in the advancement of science; and a conscientious teacher; the career of Prof. Freer is one that his friends and family may be proud of, and that the profession may well strive to imitate.

In this dark hour of his family's distress, we unite our warmest sympathy and love with that of his many patrons, to whom he was always most cordially and devotedly attached.

G. G. Goll, M. D., of this city, was born in Ulerdam Kingdom, Saxony, April 30, 1845. Died in Chicago, on the 29th day of March, 1877, of double pneumonia, being 32 years of age.

His parents came to America in 1852, when he was 7 years old. He received a fair education in the public schools of this city; graduated at Bryant & Stratton's Commercial College in 1866; studied and practiced pharmacy with his brother, in this city. Becoming dissatisfied with the business, and always having had a desire to enter what he called the noblest profession of all, entered Rush Medical College in 1868, and graduated in medicine, in 1871.

He became a member of this Society at its last session in this city, in 1874, but has never taken an active part in its proceedings. He was a young man of fair talents and fine prospects.

In conclusion, I desire again to express to you my sincere thanks, not only for the honor conferred by placing me in this chair, but for the cordial treatment I have ever experienced at your hands during my 23 years connection with the Society, and more especially during my nine years of official relation to you.

Again, allow me to wish you greater prosperity in the future than in the past. May your interest never grow less, and may

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your lamp of usefulness continue to burn brighter and brighter till the perfect day.

Dr. E. Ingals moved that the address be referred to the Committee on Publication, with instructions to publish.

Dr. N. S. Davis moved that the report of the Committee on State Board of Health be heard the first thing in the afternoon. The motion prevailed.

Dr. Ransom Dexter, recommended as a member, was referred to the Board of Censors.

On motion of Dr. Davis, the Society adjourned until 2½ P. M.

Afternoon Session.

The Association reconvened at half past 2 P. M.

Dr. Hyde announced that the committee of the two medical societies of the city, in whose name the banquet is tendered, had brought tickets for the banquet, which members could have by applying for them.

Dr. E. W. Gray, chairman of the Committee on State Board of Health, read his report, saying preliminarily:

I desire to say, before reading this report, that it was found impracticable to get such a meeting of the committee as was desired, and that for the report he was about to present, he himself was largely responsible, although he had some assurance from members of the committee that they concurred in his views. The report is as follows:

Mr. President and Gentlemen:

Your committee appointed to memorialize the Legislature on the subject of establishing a State Board of Health, beg leave to submit the following report:

Soon after your committee were apprised of their appointment, they took measures to bring the subject of sanitary legislation to the notice of our then elected law makers at their houses, and to urge its claims to their consideration. By personal request, and by circular letter, they sought the co-operation of the District and County Medical Societies throughout the State, to aid them in accomplishing this end. It gives us pleasure to

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state that the response to our request was general and full of encouragement.

Your committee also sent out with this circular letter a general statement of the case, giving some facts and figures, amounting to an argument for a State Board, which proved to be useful in forwarding the end sought.

The subject was new. As to sanitary legislation the statutes of the State were a positive blank. The average legislator knew absolutely nothing of what was needed, or what was practicable.

So many State Boards had already been created, some of which had proved to be expensive, and withal inefficient, that a profound and widespread prejudice existed against creating any other Boards.

The press of the State, almost without exception, was either utterly indifferent or positively opposed. The cry of hard times, and the necessity for economy, rung upon the ear at every corner. All these things were met by your committee at the very threshold of their undertaking, and constituted difficulties that must be overcome.

Having prepared a memorial which is herewith presented as a part of our report, and a bill, suited as we thought, to the needs of the State, and so drawn as to avoid objective criticism and needless opposition, your committee went before the Legislature with a purpose to win.

They were assisted by the Committee of the American Medical Association, through Dr. Johnston, their chairman. They were very much assisted by a committee appointed by the physicians of Chicago through Dr. Hollister. their chairman, whose elegant and appreciative letter was used successfully among the members of both Houses. They were also assisted by various communications of Dr. Fitch, and by a printed circular letter issued by Drs. Fitch and Johnston, requesting physicians to urge the matter upon their respective representatives in the Legislature, and more than all, perhaps, they were assisted by the numerous appeals made by the medical profession of the State to their senators and representatives, urging them to support the measure.

These instrumentalities were followed up by persistent lobby-

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ing, and such explanation and defense of the various items of the bill as could be made on the ground, and the result, your committee are happy to report, is at this writing very encouraging.

Our bill, shorn somewhat, it is true, of its prospective usefulness by making the appropriation $5,000 for two years, instead of $10,000, the amount we asked for, has passed the House by a vote of 96 to 37, and is before the Senate on "second reading," with fair prospects of final passage in a few days. It is herewith presented:

Your committee desire to acknowledge special obligations to Drs. Black, Bartholow, Reaburn, Pearce, Secrist, Ramsey, and other physicians, members of the House, who stood by the measure with heroic fidelity from the first, and to Dr. Rauch, President of the American Public Health Association, for timely assistance, at an opportune moment.

With this simple statement of facts, Mr. President and gentlemen, and with the hearty congratulations of the committee, that the State Society embraced an opportunity so favorable for the presentation of this subject to the people of Illinois, you will permit us to hope that the duties of your committee have been satisfactorily discharged.

E. W. Gray.
S. H. Birney,
W. M. Chambers, } *Committee.*
William Massie,
F. B. Haller,

Dr. Hawley, of Aurora, moved that the report and address be referred to the Committee on Publication, and that the thanks of the Society be tendered to the committee for the able manner in which they had conducted the work.

The President suggested that it would be well to continue the committee as their work was not completed. The motion of Dr. Hawley was amended as suggested, and adopted.

Dr. N. S. Davis, announced that he had received a letter from Dr. H. Z. Gill, Chairman of the Commtttee on Otology, stating that he could not be present this year, but would like to be appointed as a Special Committee to report on Croup next year.

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On motion this letter was referred to the Nominating Committee.

Dr. Davis, announced that the Committee on Electro-Therapeutics, Dr. P. S. Hayes, chairman, was ready to report. He moved that the report be made the special order for 9.30 o'clock Wednesday morning. Carried.

Dr. Davis also announced that Dr. C. T. Wilbur had a short report on Idiocy, which he would like to present at as early an hour as possible. Dr. Davis moved that the report be heard this afternoon, if there is time. Carried.

Dr. N. S. Read, Chairman of the Committee on Practical Medicine, presented his report as follows:

REPORT ON PRACTICAL MEDICINE.

N. S. READ, CHANDLERVILLE.

MR. PRESIDENT AND GENTLEMEN OF THE ILLINOIS STATE MEDICAL SOCIETY:

When you honored me with the appointment of chairman of the Committee on Practical Medicine, I was highly gratified. Not simply for the honor shown me, but for the privilege of thus bringing before this association a subject on which I had thought much for the past few years.

Not that I expected to introduce anything new to this Society, the members of which, at least, a greater part, have larger and more varied fields for research than myself, but that, in the discussion of this topic, namely, septic diseases and their treatment, we might, in the comparatively new views assigned for the causes of the diseases, by facts and experiments brought out here, be led into the full light of the truth, and thus have a sure foundation for intelligent practice.

But, much as I desired to be present and have this matter brought up for discussion, I had abandoned all hope of this pleasure, owing to ill health and a large country practice, and wrote our secretary that for these reasons, I should be unable to make a report, and what I have done has been done at intervals, during the last few days, and will be only prelim-

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inary, and I would ask the Society to request that this topic be continued by the committee appointed this year.

Sometime, the last of February, I sent out nearly one hundred circulars, in which I asked for experience in the treatment of septic disease. They were responded to only in six or seven cases, (those articles the Society might do well to consider), which makes me still more anxious the subject should be brought before this Association.

The theory of the origin of septic disease is of comparatively recent date, and is to-day attracting the especial attention of many of our ablest men.

We have long known that the infection of small-pox produces small-pox, and measles, measles, and so on through the so-called contagious diseases.

But there is another class of diseases, as to the origin of which there has been some diversity of opinion. Are we not slowly but surely learning that each disease has its specific *seed*, as truly as more than four thousand years ago it was said, "the earth brought forth grass and herb, yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind."

Since my attention has been directed to this subject, I have found that those remedies which were most efficient in the treatment of many forms of disease are found to be more or less antibacteria and antiferment.

Something over twenty-five years ago, (if my memory serves me right), there was an epidemic of erysipelas which prevailed in Ohio. It extended over a belt from 50 to 60 miles in width, running from north to south across the state.

I treated my patients with quinine, from the commencement of the attack until convalescent with good success.

The slightest operation could not be performed without erysipelas attacking the wound.

Dr. Mussey, of Cincinnati, in one of the surgical wards of the hospital, applied a dressing of lint wet in a solution of quinine, and in no instance was there an attack of erysipelas. It was then thought that quinine acted as a general and local

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tonic. It is now found to be powerfully antibacteria and antiferment. Dr. Black, of Jacksonville, made some experiments for me during the past year, with quinine, and found that it was very destructive to those low forms of life, and it may yet be shown that its virtue is due its power to destroy the germs which produce disease rather than its tonic property.

There was, in '54, some two years after I came to the State, an epidemic of typhoid fever, in which I treated over one hundred cases. I noticed frequently in families where one or two were sick, that other members of the family (for scarcely ever would one escape), from three to five days before being taken down, would complain of wakefulness, say they could not sleep. On asking them to put out the tongue, it would come out tremblingly. Such cases were sure of an attack in from three to five days. I conclude this to be the period of incubation. I have been called on to prescribe for several such cases (namely, wakefulness) within the last two years. On visiting the patient, would find the same trembling tongue. My diagnosis was typhoid fever in the incubation stage. I prescribed:

℞	Quinine, - - -	grs. xxxvi.
	Acid Citric, - - -	ʒi.
	Potas. Iod. - - -	ʒi.
	Syrup Arom., - - -	℥vi.

M. Sig. Tablespoonful every four hours, with xx. grs. hyd. chloral at night, if needed to produce sleep. Sometimes the chloral would be needed; in others they would rest without it, and the disease, in every case, has been aborted.

I do not claim that this will *always* be the result, but I do think that many long, tedious, and perhaps fatal, cases might be prevented, if we could be called thus early, by destroying the germs before they had so far multiplied as to make the case, not one to cure, but, as our authors say, to conduct, if possible, to a favorable termination. I am strengthened in my belief of this theory by reading two very valuable articles from John Tyndale, in the April and December, '76, numbers of the *Popular Science Monthly*, which any one who has not read will be well paid to do so.

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And I do believe the time is coming when the physician's duty will be, not so much to cure disease as to prevent it. And when we come to so thoroughly understand our business, and the public have such confidence in us that they will apply early for our aid, then the good time prophesied of in Holy Writ will come, "when the child shall die at a hundred years."

We have had some diptheria in our vicinity. One case, a very malignant one, I will report:

Was called, April 4th, to see a daughter of Joseph Briar. Aged 15. She had been complaining of sore throat some three or four days before I was called. I found her with the glands of the neck, both sides, very much swollen. On examination of the throat, found one tonsil covered with false membrane, extending over the soft palate and larynx; pulse 120, small and soft; temperature 98; the bowels had been evacuated the day before with a dose of compound cathartic pills. I prescribed quinine, tinct. ferri chloride, chlorate of potash gargle, spraying the throat with carbolic acid.

April 5th. Symptoms very much the same. Membrane had extended to the other tonsil. Continued the treatment, with the addition of salicylic acid and borax, equal parts, reduced to a fine powder and blown into the throat every four hours, supporting the patient with beef essence.

April 6, A. M. Pulse 110, fuller; temperature 99; false membrane very much lessened; had coughed up large quantities, a specimen of which I have here; breathing easier.

April 7th. Membrane entirely gone from the throat, but could hear the flapping of loosened membrane in the trachea. Continued the treatment. Let me here remark that I have found nothing so efficient, in my hands, in removing the false membrane as the salicylic acid and borax used as above. They are both antiseptics, and the borax helps to dissolve the acid while in contact with the parts.

April 8th. Patient worse. There had been a sudden change from a warm, dry atmosphere to a cold rain with east wind. How much the change in my patient for the worse was due the change of weather, I am unable to say, but I have often

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observed that patients with diptheria would become worse on such a change.

Pulse 120; temperature 96; more difficulty of breathing; false membrane extended into the bronchia. Continued treatment, with the addition of brandy.

April 9th. Patient sinking and died on the 10th.

We have had some Scarlet Fever, one of which I will report:

Feb. 20. Called to Charles Durings; found a little patient, 3 years old, with the usual characteristics of Scarlatina Anginosa, the rash showing itself in patches over the entire back, also, on the chest; tonsils very much swollen; pulse 200; tongue coated; respiration hurried; urine scanty; temperature 107; the bowels had been moved the day previous with senna. Prescribed:

℞ Sulpho Carbolate of Soda, - - ʒvi.
Water, - - - - - - ℥iv.

Teaspoonful every four hours.

Quinine, - - - - grs. xvi.
Acid Arom. Sulph. - - m. xx.
Syrup Simp. - - - ℥ii.

Teaspoonful every four hours between the doses of the car bolate. Fat bacon to the throat.

21st. Pulse 160; temperature 103; breathing more regular.

22d. Pulse 140; temperature 95. Treatment continued.

23d. Pulse 120; temperature 95. Continued the remedies at longer intervals. The case made a rapid recovery, with no sequel.

The family consisted of husband, wife and six children. One of five years old had every symptom of the disease: vomiting, feverish, slight soreness of the throat, etc. I put him, with all the other members of the family on the carbolate and quinine. The fever was arrested in the little five-year-old, and no new cases have occurred.

I have used quinine in scarlet fever for 20 years, with good results. This is my first trial of the carbolate. I am so well well pleased with it I shall try it further.

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It enables us to introduce into the system, without disturbance a large quantity of perhaps the most powerful antiseptic known; viz., carbolic acid. This is a very hastily written and very meagre report, but I trust the Society will excuse it for the reasons above named.

Prof. E. F. Ingals presented, in connection with the report, the following paper:

AN IMPROVED METHOD OF PERFORMING THE RADICAL OPERATION IN EMPYEMA.

By E. FLETCHER INGALS, M. D.

(Lecturer on Diseases of the Chest and Physical Diagnosis in Rush Medical College.)

The removal of pus from the pleural sac by means of the aspirator, even though often repeated, is not likely to cure the patient, however, in rare instances recovery follows this method of treatment, therefore it is advisable to give it a trial.

As soon, however, as it becomes apparent that this procedure is not sufficient, the radical operation, or the establishment of an opening for free drainage and cleansing of the cavity is indicated.

With regard to the operation, Prof. Flint in his work on practice, says, "An opening should then be made at the bottom of the pleural sac, allowing the pus to escape freely. Air will gain admission into the chest, and, since this is unavoidable, its ingress and egress should be unobstructed. A small orifice, not sufficient for the free escape of the pus, and allowing air to be pent up within the pleural cavity, is injudicious. The pus becoming decomposed and fetid, acts as an irritant on the inflamed surfaces, whereas, if it drain away as fast as it is formed, and the cavity of the pleura be well ventilated, this result does not follow."

Dr. W. W. Gerhard, in the revised edition of his work (1860), remarks of this operation, the chances of recovery are not, on the whole, increased by the operation, unless it be performed very carefully, and it is one which we should not prac-

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tice, unless it be to relieve excessive dyspnœa. After refering to Dr. Bowditch's method of operating, he says, "I must confess that the operation is always of doubtful benefit, and very often inadmissible. Indeed, in ordinary cases of chronic pleurisy, I would not dream of performing it."

On this subject, Prof. Frank H. Hamilton, in his work on military surgery, says, "The existence of pyothorax having been fully ascertained, no time ought to be lost in giving the pus a thorough evacuation." He also says, regarding idiopathic pyothorax—this term being employed in contradistinction to traumatic—"It is of the highest importance to exclude air." On the contrary, Doctor Fuller thought the admission of air of not the slightest importance.

Dr. Bowditch seems in favor of excluding the air, though he does not lay great stress upon this point. The use of a drainage tube, as first proposed by Chassaignac, and afterwards practiced by Drs. Gosselin, Goodfellow and DeMorgan, is recommended by Drs. Waters, Watson, Aitken and others. Prof. Gross in his System of Surgery, fourth edition, 1866, says of the use of the drainage tube, "This treatment, it seems to me, should not be encouraged, as it is both harsh and dangerous." The drainage tube here mentioned was introduced between the fifth and sixth rib, and brought out at the lower part of the pleural sac through a counter opening.

Fraentzel, in the fourth volume of Ziemssen's Cyclopædia, says of this treatment: "No physician would now carry out drainage in the way it was proposed by Chassaignac."

In the Boston *Medical and Surgical Journal*, August, 1874, Dr. Henry Clarke, of Worcester, after reviewing the various methods of operating that have been suggested, remarks, that after two thousand years of experience and prolonged discussion, concerning the expediency of the operation and the method of operating, we come back substantially so far as relates to empyema, to the simple practice of Hippocrates, that is to opening freely with the knife and keep the incision open so long as pus continues to collect.

The weight of authority is in favor of free drainage, and

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while many do not think the entrance of air injurious, perhaps for the reason given by Dr. Flint; viz., that it is unavoidable, there are many others who think its exclusion a matter of no little importance. To accomplish this end, it has been recommended that the operation be made under water, with the patient in a bath, and that the wound be hermetically sealed.

Dr. Erichsen suggests that a canula or an elastic tube may be left in the wound to allow of the pus being drawn off and the cavity cleansed. The late Prof. Freer, Dr. Powell, and others, have used a siphon drainage tube introduced through a free opening into the chest; but all the methods heretofore recommended, contemplate either the frequent repetition of the operation, or the admission of air.

Frequent operations by means of the aspirator have not thus far been attended with satisfactory results, and although the entrance of air into the pleural sac is not a serious accident, still it leads to putrefactive changes in the pus, if this be not removed so fast as formed; and, from several cases observed in the Roosevelt Hospital in 1873, it appears that the amount of pus secreted is much greater in patients where air is freely admitted than in those where it is excluded.

By the modification in the operation suggested in this paper, we secure the essential points insisted upon by nearly all who have written on this subject; viz., free drainage and the exclusion of air.

For the improved operation the following articles are required: A trochar, the canula of which is of just sufficient size to allow the passage of a drainage tube; a piece of sheet rubber for a valve, 2½ inches in diameter, such as dentists use for the rubber dam, excepting that it should be about twice as thick; a piece of rubber tubing (drainage tube) about 3-16 of an inch in diameter, and a foot and a half to five feet in length; an elastic bandage, two inches in width, long enough to reach around the patient's chest; and a small ring, which, when slipped over the bent drainage tube, will hermetically seal it at the point of flexure.

The drainage tube should be perforated on the sides in three

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or four places, near the extremity, which is to be inserted into the chest. It should then be marked with ink at distances of about six and nine inches from the same end, so that when introduced, we may know how much of the tube is within the pleural sac.

The operation is performed in the following manner: The patient being ready, the tube is filled with water, its distal end closed by the ring, and placed in a basin of water beside the bed. The trochar is thrust through the centre of the small piece of rubber, which is to act as a valve, and this is drawn over the canula. Having oiled the trochar, it is to be thrust into the chest, at either of the points usually recommended for the operation.

As the stilet is withdrawn, the thumb should be placed over the end of the canula to stop the flow of pus until the drainage tube can be reached. The tube is then crowded through the canula for a sufficient distance, and the canula is withdrawn; as it leaves the chest walls, the rubber valve is slipped off upon the tube close to the surface of the chest. The extremity of the tube may now be opened under water, the canula slipped off, and the pus allowed to flow.

As the stilet is withdrawn, the pus escapes in a full stream, and during the passage of the tube through the canula no air can enter, on account of the pressure of pus from within. In this way the operation can easily be completed without the entrance of a single bubble of air.

After the tube is inserted, an aspirator can be attached, or the pus may simply flow out through the siphon. The latter method is sometimes preferable, as the aspirator is liable to cause too great atmospheric pressure upon the expanding lung, and consequent rupture of some of the smaller blood vessels. After the pus has ceased flowing, the cavity may be washed out with a one or two per cent. solution of carbolic acid, at 100° F., or the cleansing may be deferred for twenty-four or forty-eight hours.

After the pus has been discharged, a slit a couple of inches in length, should be made in the middle of the elastic bandage

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for the passage of the tube, and the bandage should then be pinned snugly about the chest, over the rubber valve.

In the after treatment, the pleural sac should be cleansed once or twice daily with a weak solution of carbolic acid. During the treatment, if the cavity ceases to diminish in size, other injections may be substituted.

In cleansing the cavity, the end of the tube should be placed under water, in a basin, which can be raised to any desired height. The fluid flows into the chest through the siphon and then out by the same means.

Between the visits of the physician, the end of the tube may be left under water, to which a little carbolic acid has been added, or it may simply be bent upon itself and closed, by slipping over it the little ring. Though the former method is preferable, the latter will sometimes be found necessary with restless patients. If the latter plan is adopted, the cavity should be cleansed twice a day.

For two or three days after the operation, the soft tissues in the intercostal space grasp the tube firmly and keep the cavity hermetically closed, but at the end of this time, the tube becomes loose in the opening through the chest walls, so that air would enter, or the tube would fall out, were it not for the piece of rubber, which was placed on it when the canula was withdrawn.

This rubber not only acts as a perfect valve, when held by the elastic band, to prevent the ingress of air, but it also holds the tube in position, with sufficient firmness to prevent its being withdrawn by any ordinary force. The tube may be still further secured, if thought best, by a bandage placed about the chest.

The force with which the fluid flows into the cavity may be perfectly regulated by the height of the column of water in the siphon. As soon as the cavity becomes slightly distended, the patient will complain of uneasiness or pain in the chest, and then the tube should be at once lowered, to stop the flow.

This has the advantage over methods usually recommended of occasioning but a trifling wound, and consequently slight

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constitutional disturbance from that cause—of preventing the entrance of air—of simplicity in the operation and convenience in after treatment—of painlessness after the soreness from the puncture has subsided, and of comfort and neatness for the patient. It is nearly as simple as paracentesis with the aspirator, and is attended with little if any 'more danger to the patient.

It might be used in those unyielding cases of chronic pleurisy with serous effusion, where the cavity rapidly refills after paracentesis.

In illustration, I subjoin the reports of two cases operated upon by this method.

Case I. A patient of Dr. P. H. Mathei. Seen in consultation with Drs. Mathei and E. Ingals, December 1st, 1876. E. G., aged four years, was attacked with rheumatism four weeks ago. A few days later complained of pain in left side, evidently of a pleuritic character. To-day the patient complains of severe pain in left side of neck, he has lost considerably in strength and weight,—appetite poor, thirst considerable, digestion fair, bowels loose, urine scanty at times and profuse at others. Pulse small and quick, 130 per minute; respirations, 40. Frequent hacking cough with no expectoration. Curvature of spine with immobility of left side and bulging, especially of left mammary region. Flatness over greater part of left side, with feebly transmitted respiratory sounds. Apex beat of heart within half an inch of the right nipple. Just below the nipple the right side measured ten and five-eights, and the left nine and five-eights inches. Introduced needle of aspirator, near the angles, between the eighth and ninth ribs, and withdrew five and a half ounces of thick yellow pus, when coughing came on and the pus ceased flowing; although the cavity was not empty, the needle was withdrawn. After the operation the apex beat could be felt about three-eights of an inch nearer the sternum. Soon the child became quiet, and he subseqnently did well for several days. The severe pain in the left side of the neck was perfectly relieved by the operation.

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Dec. 7th. Pain in neck has returned. The patient very restless and suffering from dyspnœa. Punctured the chest again near the same point as before and withdrew eighteen ounces of healthy pus. A few drachms of blood flowed with the last of the pus. The impulse of the heart changed in consequence of operation from a position near the right nipple, to the left side of the sternum. The respiratory sounds became quite distinct in left lung. The child did well for two or three days after the operation.

Dec. 12th. Respirations, 44; pulse, 150. Patient very weak. Apex beat near right nipple. Performed paracentesis near the point of the last puncture and withdrew fifteen and a half ounces of pus. The heart returned nearly to its normal position and the left side which had measured eleven and one-fourth inches before the operation, measured only ten and three-fourths inches afterward.

Dec. 21st. The patient did well for four or five days after the last operation, but for a few days has been losing; suffering greatly from dyspnœa and pain. During last night he took, beside several grains of bromide of potassium and several drops of laudanum, a grain and a half of morphia in doses of a quarter of a grain each, yet he did not sleep. There is œdema of the left side of the chest, as low as the last rib where it abruptly terminates. The struggles of the child in opposing another operation, caused the wound of the last puncture to reopen. From the opening, thick pus slowly escaped.

In the afternoon of this day, I operated in the method described, excepting that air was allowed to enter the chest. The aspirator was applied after the dressings had been secured and the air withdrawn with the remaining pus. Twenty-three ounces of a thick, greenish-yellow pus were obtained. About half an ounce of blood flowed after the aspirator had been attached. The pleural sac was not cleansed in this case, until the following day, afterward it was washed out every day with a one per cent. solution of carbolic acid. The tube was bent upon itself and kept closed, except morning and evening

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when it was opened under water and the pus allowed to flow out. The pus remained more or less bloody for several days. The cavity was rapidly obliterated so that in two weeks it would hold only two ounces. Three weeks after the operation it was noted that the child had been suffering for several days with rheumatic pains, and that he had just passed through an attack of varicella. Not more than half a drachm of pus had escaped morning and evening for several days, and the cavity would not hold more than two drachms.

Jan. 13th. The bandage having been removed, the tube fell or was crowded out to-day—cavity entirely obliterated.

Four weeks after the operation, the patient was discharged by Dr. Mathei as cured; the opening in chest was healed, the lung expanded freely, the impulse of the heart was normal and there was no dyspnœa. A month later there was slight curvature of the spine and depression of the left side, but after a few weeks the child presented a normal appearance of the chest and was in perfect health. During the treatment, from two to three grains of quinine were administered daily, and Dover's powder or morphia were administered when needed to relieve pain and secure rest.

March 18th, 1877. Case II. Mrs. P., aged 30, mother of two children, youngest about three years of age. Has been sick about eighteen months. From the history, seems first to have had pleurisy. Was attended for several months by regular physicians, and then fell into the hands of a quack, who maltreated her for nine months.

The patient is very feeble; harassed by an almost constant cough, and frequently expectorates a considerable quantity of grayish white sputa, of a nummular form. Complains of severe pain in the right side, for which she is obliged to take frequent doses of morphia. Pulse, 118; respirations, 28.

Dullness on right side above fifth rib in front, and above sixth behind. Flatness below these points, and extending one inch higher in axillary region. When lying upon left side a slight degree of resonance extends about an inch lower in the axillary region. Heart one half inch farther to the left than

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normal. Retraction of right side. On a level with the sixth costal cartilage, the sides each measure nearly fourteen inches, the left may be an eighth of an inch smaller. Left side moves half an inch in full inspiration. No expansion of right side. With the assistance of Dr. D. R. Brower, I administered nitrous oxide gas, and punctured the chest between the seventh and eighth ribs, a little in front of their angles, but as no pus was obtained the needle was withdrawn, and another puncture made about an inch nearer the spine, between the sixth and seventh ribs. From this opening we withdrew six ounces of thick yellow pus. The patient steadily improved after the operation for about three weeks. Twenty-four hours after the operation she was able to sleep comfortably without morphia, as her cough and pain had entirely disappeared. The cough returned in about twelve days, but was not severe. Eighteen days after the operation, slightly amphoric resonance and amphoric respiration were present below the sixth rib, one inch external to the line of the right nipple.

Three weeks after the puncture, the coughing became frequent, and the pain returned to the right side. The flatness which had greatly diminished after the operation, became greater than before.

April 15th. Four weeks after the aspiration, we again gave nitrous oxide gas, and performed the radical operation as above described, evacuating thirteen ounces of thick pus. We used the aspirator in this case to evacuate the last of the pus; though I now think, it would be better to rely simply on the siphon. One or two ounces of blood followed the aspiration. No air entered the chest. After the pus had been evacuated the cavity was washed out with a weak solution—about one per cent. of carbolic acid.

The end of the tube was kept closed for two or three days, excepting when the pleural sac was cleansed in the morning. Afterward it was placed under water, and constant drainage allowed.

The cavity rapidly diminished in size for eight days, when it would hold only one ounce.

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On the evening of the 23d of April the patient, in rising from a chair, accidentally caught the tube and pulled it nearly out of the chest. I was sent for, but finding it impossible to reinsert the tube, and thinking the cavity would heal before the opening in the chest closed, I removed the drainage tube and dressed the external opening with a carbolized compress. Five days later the following notes were made: External opening healed. Patient has gained four pounds in twelve days, and feels well.

The patient continued improving for six or eight days, following the last entry, and then after a hacking cough, which lasted nearly a day, she was taken with pains in both sides of the chest, and after a few hours the cough became violent. For the following three days she expectorated about a pint each day of the same muco-purulent, nummular sputa as before the operation. At this time there were distinct signs of a pulmonary cavity where the amphoric respiration had been observed three weeks previously, but the pleural cavity from which the pus had been withdrawn was entirely healed. The case is still under observation.

P. S. July 1st. Patient steadily improving.

The following letters also accompany the Report on Practical Medicine:

WILMINGTON, March 15, 1877.

DR. N. S. READ,—*Dear Sir:*—Yours of Feb. 22d, received. As to your "*especial regard*" the abortive treatment of septic, contagious and infectious, diseases, I would say that I always aim to intercept, so far as my knowledge and skill will permit, the spread of specific poisons in the system, whether they consist, according to Liebermeister's theory of the microscopic organisms, of either animal or vegetable proclivities, which are external to the body, and affect the system by coming in contact with the mucous membrane, or some abraded surface of the skin, and thereby enter the body through either the lymphatics, or through the blood vessels, or whether the *materies morbi* is of a chemical nature, it matters not, for should the former theory prevail, I claim that these organisms should be destroyed by some means sooner or later, although we have

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not that therapeutic compound at our command just at present, that we can offer as a successful prophylactic. And should the chemical theory prove to be the true solution of the vexed question, we should be able to neutralize the same in the system as well as out, when once fully identified. Or assuming these poisons to be of a gaseous nature like ether, chloroform or any of the inhaling mixtures, and we would only look to the two thousand square feet of lung surface, where one-fifth of the entire weight of the body is brought in contact with the ten thousand pints of air every twenty-four hours, for a solution of the whole question of blood poison and consequent disintegration, and vital changes resulting therefrom in all the above class of diseases of a contagious or infectious nature.

With the above brief hints, I will proceed to give you a sketch of one of the epidemics that occurred in this section during the past year.

The first was that of diphtheria, which commenced the latter part of last August, and continued with great severity until about the middle of January, 1877, and as the diphtheria cases began to lessen, scarlet fever set in, but of a mild type, although it spread with great rapidity throughout the entire community.

During the past six months my case book registers one hundred and ninety-two cases of diphtheria in my own practice, and in consultation with other physicians, with the result of three deaths among those treated by myself from laryngeal diphtheria, and four from among those in consultation; one from laryngeal diphtheria, and three from blood poisoning.

Forty per cent. of the cases had nasal complications. Twenty-one per cent. had an extension of the diphtheritic exudation into the larynx, while in about six per cent. the tracheal and broncheal mucous membrane became involved, producing more or less solidification of lung tissue.

To give you some idea of the treatment pursued, I take from my case-book the following brief histories of a few cases:

On September 5th, 1876, I was called to see a daughter of Mr. F., aged 8 years, of good constitution. Had been complaining two or three days, had high fever since the evening

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before, with great irritability,—a hot, dry skin, and a rapid, full pulse,—the tonsils uvula and posterior nares were found covered with false membrane. Great difficulty was experienced in swallowing, and the voice decidedly nasal and croupal. I prescribed a mixture of quinine, chlorate of potash and tincture of iron in syrup, in such proportions that she received ¼ qr. of each of the two former, with 5 drops of the latter every hour. On the morning of the second day, the fever had lessened, and the skin was covered with perspiration, the pellicular formation had extended in the larynx, and the voice had become more decidedly croupal. For this, I added to the above carbolized alum, (that is alum rubbed down with carbolic acid,) as an emetic, to be followed by insufflation with the same several times in the twenty-four hours. On the sixth day the membrane had begun to vanish, and on the tenth had entirely disappeared.

On the afternoon of September 6, 1876, a sister of the above, 12 years of age, came home from school with high fever. She had complained of slight soreness of the throat, and was so languid, and listless, for the past three or four days, as to be unable to learn her lessons in school, although she was one of the best scholars in her class. I found the glands in the inferior maxillary region much swollen, the fauces completely covered with false membrane, and the nasal passages also becoming implicated. Although the pellicular formation was not very thick, it was quite extensive. For this child I prescribed the following:

℞ Di. Sul. Quinine
Chlo. Potas. aa. - - gr. xvj
Tr. Ferri. Mur., - - - ʒ ijss
Aqua Camp. - - - - ℥ jv. Mix

S. One teaspoonful every two hours, alternated with salicylic acid gr. ij.

September 7th. The symptoms are all aggravated, and during the night she had bleeding from the nose several times, and was delirious. Fever still high with scarlatiniform eruption upon the thorax.

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Continued same treatment, and ordered the throat and chest to be well covered with oil camphor.

September 8. The nasal passages are entirely filled with false membrane; the fauces covered with a dark membranous matter of a very fœted odor, and several suspicious black-looking spots observable on the uvula—pulse 140 per minute, —face covered with perspiration. In short, the vital powers appear weighed down with a poison which is becoming more evident as the debility and prostration increases. To the treatment, I ordered brandy with the beef essence every two hours. And as the larynx had become so implicated that the child could only talk in a whisper (although the respiration was not seriously disturbed), I substituted for the salicylic acid, the carbolized alum in small doses every two hours, and inhalation of steam from vinegar slightly impregnated with iodine, by adding a few drops of the latter to the vinegar in the shape of Lugol's solution. My inhaling apparatus consisted in a pail with the solution, covered with a blanket so arranged as to let in fresh air from below, and so as to cover the patient's head, letting the steam out above. Steam was generated by holding a heated iron in the mixture, immersing only so much as would furnish the requisite amount of steam, very slowly at first, so as not to frighten the little patient. This was practiced several times in the twenty-four hours in this case, and in all my cases with laryngeal complications.

September 9th. Symptoms somewhat improved,—child more quiet, pulse 130. The appearance of the fauces and nose much the same,—voice still gone. September 10th, 11th, and 12th. Symptoms same, with the exception of a gradual dropping down of the pulse. September 13th. The membrane begins to change color and disappear, and in a few days was entirely gone. From this the child slowly convalesced. She had paralysis of the soft palate, and great weakness of the muscles of the legs and arms; for which I gave her iron, strychnine, arsenic, quinine and stimulants at different times, until recovery was completely established, which was between two and three months.

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The next case I send you was one of peculiar interest to me, on account of the disposition to paralysis showing itself so early in the disease, so entirely different from that laid down in the books.

A daughter of Mr. B. F., aged 10, was taken ill, Sept. 24th, 1876. I saw her first on the 26th, and found her with the following symptoms: headache, nausea, difficult deglutition, chilliness, drowsiness, with great muscular debility, and complete aversion for food,—pulse 120, tongue slightly coated; diphtheric membrane in posterior nares, with partial paralysis of the pharyngeal muscles.

I gave the following:

℞ Chlorate of potassa, - - - ʒii.
Quinine di. sulph. - - - gr. x.
Tr. ferri mur, - - - - ʒiii.
Syrup, - - - - - - ℥ii.
Mix.

S. Half teaspoonful every three hours, alternate with

℞ Sulph. carbolate of soda, - - - gr. x.

To be taken in sweetened water. Essence of beef and wine were ordered to be given freely.

27th. Much the same; had taken the beef essence quite well, and some wine; continued treatment.

28th. Same.

29th. Much worse. The lower extremities completely paralyzed, also the external recti muscles. Pulse, 150; tongue slightly coated; pellicular exudation upon the fauces nearly gone; swallows with the greatest difficulty on account of the paralyzed condition of the pharyngeal muscles, deglutition in fact next to impossible. Ordered brandy and eggs in place of wine; also injections of brandy and beef essence, and added Fowler's solution of arsenic to other treatment.

Sept. 30. Paralysis more complete; pulse, 160; prostration so great that she faints, and vomits when she is raised up in bed; omitted all treatment except the arsenic, alternated with tr. iron, on account of the difficulty in swallowing, and the sickness and vomiting, which is exceedingly distressing, as the

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material vomited passes mostly through the nose. Gave orders to push the brandy to its fullest extent.

Oct. 1st. Pulse, 156, otherwise the same,—continued treatment.

Oct. 2d. Pulse, 148. Same; continued treatment.

Oct. 3d. Pulse, 144. Paralysis, less continued treatment.

Oct. 4th. Pulse, 136. Paralysis less, continued treatment.

Oct. 6th. Pulse, 128; still better.

From this the patient convalesced slowly. The remedies were continued in diminished doses for ten days.

Oct. 27th. Treatment discontinued. Paralyzed condition of all the muscles affected seems restored, only very weak, except that of the external rectus of the right eye. This did not regain its contractile power for three months.

I might continue the recital of cases, but as the profession are so thoroughly posted in the symptomatology of this disease, I proceed at once to give you a resume of the remedies I have found the most reliable in the treatment, and as a prophylactic.

Among my first cases a girl of seven years of age, in a family of six children, took the disease, and died on the evening of the day I first saw her, four or five days from the commencent of the attack. Upon my first visit, I found the nasal, pharyngeal and laryngeal mucous membranes entirely covered with diphtheritic exudation, the child gasping for breath, voice gone, and the larynx almost completely closed. The child died in a few hours, without even a trial of tracheotomy, as the parents would not consent.

The five remaining children were more or less about the sick one during its illness. I immediately examined them, and found no false membrane, but some redness of the fauces. The family were very much alarmed, and requested me to give them a preventive. I gave them small doses of quinine, iron, and chlorate of potash, alternated with carbolized alum; none of them took the disease. Thus I found in many cases that where all the children were put upon a treatment of this kind, where only one or two out of a number in a family had

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the disease at first, the balance would frequently escape, and in other cases it would not seem to be of any use whatever, as they would take the disease, and even die with it, after having been under the treatment for a week before, and where the sulpho-carbolate of soda had been used.

Warm, close rooms, always aggravated the disease, while well ventilated, moderately cool rooms, tended to alleviate.

Stimulants in all stages of the disease were well borne.

Calomel proved detrimental.

Nitrate of silver was of no utility in our hands.

Lime water seemed to remove the diphtheritic membrane as readily as most any other drug used, unless it was carbolized alum.

Carbolized alum in connection with sulphate of mercury, and the inhalation of steam from vinegar slightly impregnated with iodine solution, was found to be the most successful and satisfactory of any treatment instituted in the laryngeal variety.

Sulpho-carbolate of soda, or the carbolized alum, in connection with quinine, iron, and stimulants, proved most satisfactory in all cases where blood poisoning and consequent inhibition of the heart's action was most imminent.

Salicylic acid did not seem to act better than quinine.

Chlorate of potassa was given in most of the cases.

No remedy seemed to be a prophylactic to the disease after the initiatory fever had set in, and whether any of the children would have had the disease, in those families where part only of those exposed took the disease, after taking preventives so called, is a question.

Bichromate of potash in mild cases did seem to subdue the pellicular formation, more readily than other remedies, but was of little use in severe ones.

In conclusion, I would say that after the initiatory fever set in, or even after swelling of the submaxillary glands was noticed, the disease ceased to be local, if it ever was so, (as I very much doubt) and comes to be a constitutional malady,

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and consequently only amenable to general treatment in the main.

Hoping you will excuse the many mistakes in this hurried letter, I remain,

Respectfully yours,
E. R. WILLARD.

DR. N. S. READ—*Dear Sir:*—Your circular letter of Feb. 22d, is received. I do not know that I can say anything that will aid you in making your report, or that I entertain any peculiar views on septic diseases. I place much reliance upon the use of quinine in septic diseases, believing that its antimalarial or antiseptic properties (if not owing to any property it possesses of destroying the poisonous germs of the disease) are due to its tonic properties, or power of sustaining the patient until the disease has spent its force, or is eliminated. Latterly, my views have been strengthened by reading the very voluminous article on infectious diseases in "*Ziemssen's Cyclopædia of the Practice of Medicine.*" I have not ventured to give as large doses of quinine as is there recommended, but will relate a case, as illustrative of my practice:

June 18, 1876. Was called to Mr. E. M. W. Aged 19 years. An American of good habits. Occupation, clerk in insurance office. Has been complaining of general malaise, loss of appetite, with inability to endure work, for about a month. For the last eight days he has kept his bed and been under Homœopathic treatment. He presented the following symptoms: Skin dry; pulse 115 per minute; tongue heavily coated in the middle, with red edges, and inclined to be very dry; has thirst, nausea and headache; abdomen distended, tympanitic and tender, especially over the ilio cœcal-valve; alvine evacuations frequent, thin and offensive; urine scanty; restless, having had very little sleep for a week, and when asleep has unpleasant dreams and talks incoherently, but is easily roused, and rational when awake. My diagnosis was typhoid fever. An older brother had been sick with similar disease over three months, and was but just convalescent.

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Was treated Homœopathically. I at once moved the bowels with sulph. magnesia and aromatic sulph. acid, as I had no evidence that the upper bowel had been evacuated for a long time. Then prescribed sulph. quinia ʒi., divided into 6 doses, one to be given every three hours; also 1-6 gr. sulph. morphia every 4 hours. My patient slept well the following night. Fomentations were kept over the abdomen constantly, and the skin occasionally moistened with ol. teribinth. I also gave turpentine emulsion; viz. :

Ol. Teribinth, - - -	ʒi.
Tr. Opii., - - - - - -	ʒi.
Pulv. Accasia, - - -	ʒiij.
White Sugar, - - - -	ʒiij.
Ess. Gaultheria, - - -	ʒss.
Aqua, q. s. to fill a 3 oz. vial.	

Dose, a teaspoonful every four hours.

After the six quinine powders are taken, omit quinine for 24 hours, and then give ʒss. quinine, in 5 gr. powders, every 4 hours, with morphine enough to secure rest. Later, I gave a tonic of tr. cinchona, gentian and columbo. The diet was chiefly milk and broths, all the time great care being taken to prevent the dejections contaminating the atmosphere of the room, solution of carbolic acid being kept constantly in the vessel. The body and limbs were sponged daily with tepid salt water. On the eleventh day after my first visit, he was discharged, convalescent. Of course, this is but an outline of the treatment, but serves to illustrate my ideas. I claim nothing new, the large doses of quinine being the only peculiar feature, and, as a rule, they have fulfilled my expectations thus far.

Scarlatina is attracting much attention at this time, and has prevailed to quite an extent with us. Mostly in a mild form, though I have recently had some very severe, though not fatal cases. My treatment is the same that I have pursued for 20 years, the newly vaunted specifics possessing no advantages over the older treatment, so far as my observation goes.

My plan is about as follows; Give gentle laxatives, to keep the bowels soluble. Use potass. chlo. in solution, with tr. ferri

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chlo. every hour or two, not only as a gargle, but to be swallowed, or Watson's Chlorine Mixture. Also give Dover's powder, in moderate doses. Have the body and limbs bathed once a day in tepid Castile soap suds, and thoroughly anointed three or four times a day with fresh hog's lard. I have had patients, that were nearly frantic with the burning and itching from the irruption, drop into a quiet sleep, after being bathed and anointed.

This plan, varied to suit the peculiar circumstance of each case, I have had no reason to abandon.

Very truly yours,

A. HARD.

Dr. N. S. READ, Chairman of the Committee on Practical Medicine.

Dear Sir:—Your circular asking me to communicate to you my experience in the treatment of septic diseases, was duly received, and though I live in a healthy part of our State —a section that has been for several years exempt from any severe epidemic of disease bearing that character, I will cheerfully furnish the little that my limited experience will permit.

First among diseases entitled septic, I would mention erysipelas, in regard to the treatment of which there has been a diversity of opinion and practice.

A single case may illustrate my usual treatment in cases of uncomplicated erysipelas *vera.*

Mrs. D., a widow, aged 78 years, living with her son, whose wife and child had just died, as was said, of erysipelas, was found by me suffering with that disease; covering at the time of my first visit, about one-half the entire face and head. The pulse was rapid (120) and weak, the eyelids swollen to the extent that they could not be opened.

There was marked delirium and subsultus.

A cathartic had been taken the previous day, by which the bowels had been freely evacuated.

My treatment consisted in applying over the whole inflamed surface, (where the thickness of the hair did not prevent) tincture of iodine, and over this cataplasms of stewed

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cranberries. Internally, tincture ferri murius, gtts. x quinia sulphas grs. ij., alternately every two hours.

The following day there was a marked amelioration of symptoms, which continued without interruption, to convalescence. The only change of treatment being to decrease the quantity of quinine to one grain every four hours, and the supply of cranberries not being readily obtained, cloths saturated with sour buttermilk were substituted, which, inasmuch as they could be oftener renewed, were more comfortable to the patient, and I think quite as efficient in subduing inflammation.

The results of this plan of treatment have been such in my practice, that I have felt little inclination to change.

In traumatic and phlegmonous erysipelas the case is not so uniform. Frequently the physician is not called until gangrene or destructive suppuration has commenced, or is unavoidable.

What is the most judicious treatment in these cases, depends, in my judgment, upon the constitution of the patient, and more, upon the stage of inflammation to which the disease has progressed.

The "vis medicatrix naturæ" is wholly inadequate, either to control the activity of the inflammation in the onset,—to prevent the destruction of parts involved,—or to sustain the failing energies of the system in its later stages.

If seen at the commencement of the disease, an active cathartic, as the *compound cathartic pill* of the *dispensatory*, which shall at once unload the portal vessels, and the alimentary canal; or later, some one of the saline cathartics, using, at the same time, aconite, or gelseminum, or both, according to the severity of the febrile symptoms, may prove abortive to the disease in its earlier stages, or failing in this, will at least prepare the system better to respond to remedies that shall be administered subsequently.

Equally important is it to observe the first signs of failing strength, and to change at once from those remedies that are depressing, to such as are best calculated to sustain the failing

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strength, and as far as may be, prevent the destructive waste of tissue.

In cases which manifest unusual tendency to gangrene, I use poultices of charcoal and yeast, and have administered salicylic acid, both by the mouth and rectum, with good results.

Where abscesses have formed, and large quantities of fetid pus have been discharged, I have syringed out the part with carbolic acid solution, in warm water, with the effect of diminishing rapidly the purulent discharge, destroying the offensive odor, and hastening recovery.

Diphtheria I believe to be dependent upon a cause very similar in its action, whatever that cause may be, but more intense, pernicious, or infectious, and more diffused; hence, in my treatment I am governed by the same rules. Though because it is more intense, and pernicious, I am more guarded in administering antiphlogistic remedies, and would not continue them until their full effects are obtained. But anticipate the decline of febrile symptoms, by administering tonics and nutritious diet, as beef-tea, milk, oatmeal gruel, and other easily digested and assimilated articles of food.

In all these diseases I regard quinine as the most important and reliable tonic we possess. It may be given earlier in the disease, without increasing febrile action. Nitro-muriatic acid I would perhaps place next on the list, on account of its antiseptic properties, and calibeates, or other tonics, may be substituted at a later stage of disease.

So far as I have seen, nitrate of silver, or other caustic applications to the throat, in diphtheria, have been productive of more evil than good results.

Nor do I think the exercise of the inflamed part, such as attends the act of gargling, useful; but simply wetting the mouth often with bland, demulcent drinks, as slippery elm-water, or solution of gum arabic, and applying with camel's hair pencil, tincture of muriate of iron, diluted more or less, according to the age of the patient, or the severity of the local inflammation; or solution of potassæ permanganas, used in

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the same way, have, in my experience, proved far more satisfactory.

In June, 1876, it occurred to me to treat a case of acute peritonitis, which was of interest to me, from the fact that as I believe, I saved the life of my patient by administering salicylic acid by enema.

The attack was induced by exposure to wet and cold, during the menstrual flow, resulting in suppression of that discharge, and inflammation of the uterus, which rapidly extended to the peritoneum.

When I first saw this patient, the disease had already progressed to a stage which, in my view, forbade resorting to venesection.

The abdominal distention and tenderness were extreme. The pulse was rapid, and weak, and the vomiting and hiccough, both indicated the gravity of the case, and precluded the administration of remedies by the mouth.

An enema was used as follows:

Salicylic Acid - - -	grs. x.
Opii Pulv. - - -	grs. jss
Mucilago Amyle - - - -	ʒij Mix.

This was repeated in about four hours, and was followed by quiet rest.

The tympanitis diminished; the vomiting ceased; the tenderness abated.

There was a free, spontaneous evacuation of the bowels about three hours after the second enema, which was attributed to the acid, and therefore it was omitted through the day,—the starch and opium being continued every four hours, and the acid again added once at night, for two successive nights; after which quinine and whiskey, were found to be borne by the stomach, and were freely used, and my patient gradually recovered.

Whether I am correct in attributing the good result so largely to the use of this comparatively new remedy, time and further experience with it in similar cases, will determine.

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Perhaps the above outline is sufficient to indicate to you clearly enough for your purposes, my opinion and practice in the treatment of a class of diseases named by you.

D. E. FOOTE.

CARLINVILLE, ILLS., April 30, 1877.

DR. N. S. BAIRD,—*Dear Doctor:* Your circular of Feb. 22, '77, received. The subject of your report has always been one of more than ordinary interest to me, especially as the text-books so erroneously, in my judgment, construe Pyæmia and Septicæmia, or Ichoræmia, as one and the same disease. Pus globules confined in parts where they can be taken up by open capillaries large enough to receive them into the circulation, whence they are, from their size, arrested by the capillaries of the liver or lung, give rise to a pathological condition differing from septic absorption, or the reception of ichor, by a system too enfeebled to repair damage done by whatsoever cause.

Septic absorption or ichoræmia is, in the judgment of the writer, the cause of death in many diseases that do not have a tendency to destroy life per se. Among them might be mentioned diphtheria, small-pox and scarlatina, as well as different accouchments. In diphtheria, the cases of death, or those difficult to treat, that have come under my observation, if not from actual obstruction of the air passages, gave evidence of septic absorption from putrefactive changes going on beneath the deposit pathognomonic of the disease. This it is believed to be true also of the other diseases mentioned. If the reparation process of the system be impaired by the degree of intensity of the specific of the disease, or shock to the nervous system by the inceptive chill, the tendency in every case is to septic absorption, or the symptoms of "septic disease."

The writer has long since ceased to perform a surgical operation, or treat a case of diphtheria, or any disease in which he fears the reparative process of the system at all lowered, without first bracing the system with tinc. ferri, chlorid, and if required, some preparation of bark. Wounds of any kind are dressed with carbolized water, especially if recent. Chronic

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ulcers, gangrene, or fetid sores, treated with acid salicylic. In small-pox, the parts are dressed twice or thrice daily with salicylic acid dissolved in vaseline or cosmoline while melted, and used as an unguent. The effect has been speedy recovery with no pitting. The application to diphtheria is usually carbolic acid dissolved in equal parts of tinct. myrrh and capsici, and used with one of Dr. Rumbold's Sprays. In short, all treatment is sustaining internally with antiseptic local treatment.

J. P. MATTHEWS, M. D.

The President.—The Chairman of the Committee on Practical Medicine desires to complete his report by the addition of a contribution by Dr. J. P. Walker.

Dr. E. Ingals moved that the papers be referred to the Committee on Publication in connection with the Committee on Practical Medicine.

The President reminded the Society that a report by any committee, written upon more than 12 pages of foolscap, must be submitted in abstract.

Dr. Davis thought that there should be a distinction made between a report, an abstract of which is read, and a report allowed to follow other papers, none of which are read in abstract. If the Chairman of the Committee on Practical Medicine had recommended distinctly that these papers go with his report, to the Committee on Publication, then it would be understood that the committee had examined them, and we should take their recommendation. Dr. Davis, however, thought that the Society should give Dr. Edmund Andrews an opportunity to exhibit his patient, and afterwards the papers of Dr. Walker could be read.

On motion of Dr. E. Ingals, the papers of Dr. Walker were laid on the table for future consideration.

Dr. Edmund Andrews then exhibited to the Society a little patient whom he had treated for empyema. Dr. Andrews said: "I will not occupy much time in the way of remarks; but proceed to show the patient, if her timidity will permit of it. Instead of using the syphon tube, I use a tube and disc of gutta percha, closed up by a little cork inserted into the disc. The plan of treatment is to make a daily injection of carbolic acid and water, of the strength of 2½ parts of carbolic

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acid in a hundred, closing the orifice between whiles with carbolized cotton. [Here the patient was exhibited, showing the orifice in the left breast of the child. The tube was inserted, and then the injection of carbolic acid and water was made.] This patient, two weeks ago, was quite pale, with a copious discharge. She is now improved in every way, and the suppurating discharge is much diminished; with regard to the exclusion of air, I do not hesitate to admit it. I think Dr. Ingals' remarks on that subject are of importance, however. The admission of air to a suppurating cavity without disinfecting it is a serious matter. If you do not use antiseptics, air ought to be jealously excluded. But if you do use some antiseptic, as carbolic acid or salicylic acid washes, it appears that the air then admitted is of no consequence, as it produces no septic results. If the wash is too cold, it may produce some disturbance on account of its too low temperature. My experience is, that if you use the carbolic wash every 24 hours, and keep the orifice closed between times, no injury from air takes place. I think the impression remains that at the beginning of a case; if the physician sees it before the cavity is opened at all, it is well to use the aspirator. There have been cases treated by practitioners in this Society, who have used the aspirator alone, and with success.

But not unfrequently, you will find that the tendency to persistent suppuration continues in spite of the aspirator, and if such is the case, it must come, sooner or later, to the condition of an abscess discharging through an open fistula. When a few repetitions of the aspiration fail to lead towards a cure, an opening should be made, a drainage tube inserted, and antiseptic treatment commenced.

Often we see cases which have already formed an opening and are discharging large quantities of pus. I find that there is a false impression conveyed to the surgeon as to sufficiency of the size of the opening in these cases. Because the patient discharges a pint of matter a day, we are apt to think that the orifice must be sufficiently large. Nothing can be more delus-

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ive. These fistulæ are almost always too contracted. The pus, though escaping so copiously, is really delayed by the stricture. The seemingly large quantity escaping is simply forced out by powerful internal tension, and if you take a scalpel and apply it, there will be a gush of a pint at once, showing that the pus is retained under pressure. The drainage tube is needed to prevent the recontraction of the orifice. The carbolized injections in a few days arrest the formation of pus, so that the discharge is merely serum. The hectic fever ceases, the patient becomes fat and rosy, and the air which is admitted at the time of the injections, is deprived of its septic germs, and rendered perfectly harmless. Five years ago I treated my first case by this method, and have applied the plan to six others since, without a single failure.

I said that the air admitted with the antiseptic dressings does no harm. This is true, so far as septic consequences are concerned. There are a few cases, however, where for two or three weeks air will rush out and in through the tube at every expiration and inspiration. I think it well in such cases to put a small cork in the orifice of the drainage tube, lest the constant draft of cold air might act unfavorable.

A motion to take from the table Dr. Walker's papers supplementary to the report of the Committee on Practical Medicine, was carried, and Dr. Walker read his papers;

Dr. Davis.—I learn that these papers were given to the chairman of the committee in answer to questions, and not prepared to be read separately, or with a view to be incorporated. I move that the papers connected with the report be referred to the Committee on Publication, with a request that they publish so much as they think proper or necessary, I would also ask that opportunity be given for short, reasonable discussion of the subject by speeches not to exceed ten minutes in length. For instance, on this subject of drainage, there are members who have facts in relation to it that are important.

The President.—It is moved and seconded that the remainder of these reports, together with what have been read, be referred to the Committee on Publication, with authority to omit such parts as they see fit. Are there any remarks upon the motion?

Dr. C. M. Fitch.—I have treated several cases of empyema, and have used, in consequence of some experience I gained in the first case, a

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simple syphon, made from an ordinary nasal douche, the bottle part being connected with the rubber tube, and that connected with the silver tube which is introduced into the chest. A case which I have treated, having reference to the question of the admission of air into the chest, was one which possessed very formidable preliminary symptoms. Eighty ounces of extremely offensive pus were drawn from the chest with the aspirator. No air was admitted, although the offensiveness of the pus led to the supposition that the air was admitted. The operation gave the patient great relief; but after eight or ten days the old symptoms returned, but with less severity. The operation was repeated, and some fifty ounces of pus were drawn from the chest, when it was closed as before. Great care was taken to prevent the entrance of air into the chest. A week later it became necessary to repeat the operation. In that instance forty ounces of pus were removed. Ten days later the operation was repeated, and in that instance, at midnight, in consequence of excessive dyspnœa. I then determined to leave the cavity open. This I succeeded in doing. After introducing the trochar, I introduced a groove director, with its point blunted, so as to enable me to push the pleura from the chest in cases of adhesion. I then allowed the pus to flow freely, and with this simple syphon, which I constructed with the nasal douche, I washed the cavity out with a solution of permanganate of potassa. I soon suspected that some lesion of the lung had allowed the entrance of air into the pleural cavity; for when I introduced the permaganate of potassa, a fit of coughing caused the patient to spit up a considerable amount of this solution—of course readily detectable. As I had occasion to repeat the washing out of the cavity at each time, this solution would show itself in the sputa, showing a lesion of the lung, connected with the pleural cavity. I washed out the cavity of the chest every day for two weeks, and after that, every other day, using a weak solution of carbolic acid, two parts in a hundred. The patient made a rapid and complete recovery. He has a gun shop, at this time, on Clark street, in this city, only a few doors from the Grand Pacific Hotel.

I operated, last winter, in a similar case, employing the same means, although, in this instance, the difficulty was not so serious. I simply washed the cavity out every day, and the patient recovered quite as rapidly as if pains had been taken to exclude the air from the pleural cavity. Latterly I have taken no pains to exclude the air, but have always used these antiseptic washes, with, of course, such general treatment as was necessary to sustain the patient's vitality. It appears that the exclusion of air is not a matter of serious moment. But in the matter of simple effusion, it does seem important that the air should be excluded, and it is of great consequence, if the effusions, become purulent. If a purulent character has been established, it is necessary to allow the free escape of pus, and to keep the cavity cleansed, just as we would with an external sore.

Dr. Jenks.—I saw a case that was in the care of another physician five miles distant. I did not see it until suppuration had taken place, and knew but little of the previous history of the patient, only that it followed

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pneumonia. At my request, the cavity was opened with the lance, on the right side, just at the edge of the lower rib. About a pint of pus immediately flowed out. The next day, a little more than that, and it continued to flow for about six weeks—about a pint a day. I advised the injection of carbolic acid; but the advice was not carried out; the patient would not submit to it. The pneumonic condition, and the timidity of the patient prevented it. The physician in charge left the patient for a few weeks, and I was called to treat it. During that time I injected the cavity with carbolic acid, and left the cavity open. This cavity afterward closed up, and in my absence it broke out again near the sternum between the fifth and sixth ribs, in a circuitous route. The pleura was opened so that it formed a sort of valve, making it a difficult matter to inject it from the beginning. However, I contrived a rubber tube and injected it every other day for about twenty days, and during that time the pus was escaping at the rate of about a pint a day. When it was opened, air would pass back and forth through the opening. It continued to discharge in this way during this time, and after the doctor returned I left the case. The second day it discharged its quantity of pus—nearly a pint of clear, heavy pus, and all at once it stopped. It then closed up, and the lady commenced to recover. The patient was a young lady about twenty-two years of age, who had been teaching music and singing. She is now teaching music and singing.

Dr. Whitmire.—I have very little to say, except as to the treatment of erysipelas. I had seen, some six or eight months ago, a mention made of the sub-cutaneous injection of carbolic acid in erysipelas. There occurred a case last August in the vicinity of my practice, when I was sent for to see a lady sixty-five or seventy years old. I found the eye sealed; the inflammation extended to the ear and scalp, and below as far as the mouth. The swelling looked blue, and I concluded that it was going to slough. It was a real case of gangrenous erysipelas. I really knew not what to do for her at her age. But I put her upon the usual treatment for erysipelas—quinine and muriate tincture of iron; and I used a solution of carbolic acid and glycerine—I cannot give the exact proportions; but about fifty per cent. in bulk of the crystals of carbolic acid, with the same amount of glycerine. I mixed them warm. Of that solution, I used twenty drops in an ounce bottle—half glycerine and half water. Of this solution I made a sub-cutaneous injection, and put a little on a dozen points all around the swelling. Besides, I used a weak oleaginous solution of iodine to keep the parts soft. Under that treatment, in twenty-four hours the swelling had abated. I repeated the sub-cutaneous injection and treatment, and in four days I turned the lady off, well. The erysipelas was abated. The case made a considerable impression upon my mind, being my first experience in the use of this remedy.

The next case that occurred in my practice was of a man thirty years of age, who had been treated by another physician for two weeks. The erysipelas commenced on the face, extended to the scalp and as far as the

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hips, so that the skin was like an elephant's hide. I was called in consultation with the physician, and I advised my carbolic acid treatment. Of the solution which I used, I used what I thought to be about five full drops of carbolic acid—of course, diluted as I said. I applied the solution so effectually to the skin as to use about half an ounce. The next day the erysipelas had ceased to extend, and the swelling was going out of the whole body. I continued, for four days, the use of the solution of carbolic acid in the same manner. There were three or four relapses in the next two or three weeks, and the patient came up to see me each time. I applied the same remedy, and gave him his iron and quinine; and in three weeks he became perfectly well. I found that the carbolic acid solution produced an abatement of the erysipelas. All these cases were simple, not phlegmonous. The peculiar inflammation extended into the sub-cutaneous cellular tissue. The next case was that of an old gentleman, about sixty-five years old. I had been treating him four or five days. The erysipelas developed itself on the nose and both cheeks at the same time. I used the carbolic acid in the usual treatment but twice. I came one day about noon, and the next morning, and that was the end of this case of erysipelas; so that this case was aborted. The next case was that of a French lady—a case which occurred about two weeks ago. She had erysipelas in the face. Both eyes were swelled shut; I used the same treatment; visited her four days, using two injections. With simply two applications of the carbolic acid and the ordinary treatment, she recovered completely. I had several other minor cases in the meantime, treating them in the same manner—probably eight in all, and this treatment aborted them all.

The motion to refer the report to the Committee on Publication then prevailed.

Dr. J. L. White, chairman of the Committee on Surgery, then read the following report; Dr. S. H. Burney in the chair:

Mr. President and Gentlemen of the Ills. State Medical Society: My associates on your committee having selected special subjects upon which to report, I have thought best to call your attention briefly to a few cases, a little out of the common course, which have fallen under my own observation and that of a few personal, professional friends; and, at the same time—so far as I may be able—deduce therefrom general principles of practice.

Shortly after the last meeting of the Society, there was brought to my office a boy ten years of age, with the following

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history: Eleven weeks previously, while playing with other boys on an ash heap, his feet slipped and he fell, his legs being straddled apart, was conscious of some serious injury. His companions came to his aid, and assisted by them he hobbled to the house. His father examined him, and came to the conclusion that he had received a severe sprain without fracture or dislocation. After a few days the boy began to hobble about, and was not seen by any physician until three or four days prior to being brought to me, when Dr. Skaggs, of Ellsworth, was called to the case. (As a partial excuse for this, I should say the family lived six miles from any physician.) The doctor recognized a dislocation of the hip, and not wishing to undertake the case himself, came with the boy and his father to me. I found the boy walking with thigh abducted, body flexed on thigh, foot slightly everted; and, upon measurement from anterior, superior spinous process of ilium to internal malleolus, the affected limb was nearly two inches longer than its fellow. I had a case of dislocation of the femur downwards and forwards, head of bone resting on thyroid foramen, and this of eleven weeks standing. Gave the patient ether, and by ordinary method laid down in standard works, pried head of bone out of its position and effected a reduction, measurement showing all was right; but when the effect of the anesthetic passed off, there was a partial return of the dislocation. It seemed as if the acetabulum had become filled up, and there was nothing to hold the head of the bone in its proper position. It was, however, easily replaced, and by an improvised appliance kept in situ. Passive motion was commenced in a few days, and appliance removed. After twelve days he was allowed to get up on crutches. To-day he is without the slightest deformity, and can walk or run with most any boy of his age. After consulting all the authorities, the average practitioner would hardly feel warranted in undertaking the reduction after so long a time. I report this case, thinking it may encourage some one to undertake a similar case, should it be presented. This gave me much less difficulty than I expected it would, basing my opinion upon what I could find in standard

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works. I was very intelligently assisted by Drs. Worrell and Skaggs, to whom I wish to return thanks. Dr. R. G. Laughlin reports having reduced two cases of dislocation of the humerus of two years standing. In both cases the dislocation was downwards and forwards, being about midway between the forward dislocation under the clavicle, and the downward one into axilla. In both, the dislocation had been overlooked. The patients were entirely unable to lift the arm from the body, but had a little backward and forward motion. Both have now perfectly useful arms. The greatest difficulty in these cases was the breaking up of adhesions. I am of the opinion it is our duty to undertake the reduction of dislocations generally, after a longer period has elapsed than what is laid down by authors as justifiable. With the exercise of ordinary judgment and common sense, no harm can follow from the attempt, and much good may result. The difference between good, useful and perfect limbs and crippled ones is too great to justify a refusal to act, when the chances of success are anywhere nearly equal to those of failure.

There is living in McLean Co., a farmer who has complete anchylosis of right elbow joint, with arm flexed at a right angle. The position is anything but a satisfactory one to him. Twice the humerus has been fractured by a heavy body falling unexpectedly on hand and fore-arm. There are also living in the county two men who have partial anchylosis of the same joint. In neither of these does motion extend over a space of more than ten or fifteen degrees. In neither of them can the arm be flexed to an angle of more than twenty-five or thirty degrees. Both of them are hard-working men, one a farmer and the other a blacksmith; neither can remove his hat or feed himself with his right hand. Both are loud in their praises of the position in which the arm is fixed. They say it does not interfere in the least with their ability to earn a subsistence for themselves and those dependent on them, and that if the arm was flexed at or near a right angle, they are perfectly satisfied they would not be able to accomplish nearly as much as in the existing condition. So far as I am able to discover,

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our standard authorities are agreed in recommending the putting up of all injuries of the elbow joint—except fractures of the olicranon—with the joint flexed at or near a right angle. These cases seem to me to justify a different practice in patients dependent on manual labor for their subsistence, where anchylosis, either complete or partial, is to be anticipated. The avocation of a patient should never be lost sight of in the dressing of an injured joint, when impairment of motion is liable, permanently, to result. A member of this Society has been upon trial for malpractice within the last six months; the trial based upon the fact that in a case of injury to the elbow joint the arm was bandaged in a straight position, notwithstanding, as appeared in proof, it was very difficult, if not impossible, to maintain the parts in proper position with the arm flexed. While the plaintiff in the case had a very useful arm, the weight of authority seemed to be against the surgeon, and he came near being mulcted in damages for pursuing; in my judgment, what was his only proper course.

A little more than a year ago, I was called to see a young man, a patient of Dr. Haerring. The doctor reported the case as having been an ordinary one of pneumonia, which had run its course to convalescence, and he had ceased attendance. The patient, thinking he required it, had taken a dose of purgative medicine, and when it was about to operate had called for hurried assistance to the stool. Immediately on sitting down he screamed out with pain in his limbs, more severe in left. The friends commenced rubbing his limbs, but soon noticed they were cold. The next day Dr. H. was sent for, and found left leg and foot cold and covered with ecchymosed spots. He had limb enveloped in warm flannels, and gave freely of both stimulants and tonics, but case went on rapidly, and in three or four days the whole limb from knee down was black and dead. In this condition I found the case. There was good pulsation in femoral artery at the groin, but I could not feel it below. I amputated in middle third of femur. Artery at this point was plugged with a clot, but the collateral circulation was well established, and the flaps looked perfectly

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healthy. There was complete union by first intention, (which is something I never before saw) and for a while every indication seemed favorable; but after about three weeks from the time of amputation the patient died, apparently from pyemia. No autopsy could be obtained. Dr. Humphreys, of Mexico, Mo., reports to me a similar case as having occurred in his vicinity. In the case seen by me, the subject was leucophlegmatic, just such an one as would be liable, under favorable circumstances, to the formation of heart clots. The too sudden change of a very feeble person from a recumbent to an erect position must always, I imagine, be fraught with imminent danger. I deem the case, therefore, worthy to be reported, not only because I believe it to have been a rare one, but because it may remind us of our duty to caution patients and friends in this regard.

The treatment of fractures constitutes an important, and, perhaps I may say, the principal part of the surgical practice of the average country physician. In this department no great progress is being made; new appliances are constantly being brought to the notice of the profession, but few stand the test of time and experience. No two cases are exactly alike; nor is it reasonably to be expected that the same appliance is equally appropriate to both. In my observation, that surgeon is the most successful who relies on his ability to make or have made at the time whatever his case may require. In a work on the "treatment of wounds and fractures," written more than a century ago by Dr. John Jones, of New York, I find the following: "In every fracture of the limbs, surrounded by strong muscles, their contractile power forces the inferior extremity of the fractured bone under the superior one, which is incapable of motion, but immediately exhibits that appearance of inequality which has occasioned the false idea of a rising bone, and has put both surgeons and patients to much useless trouble and pain in dressing. The only way to remedy the evil is, relaxing the muscles of the limbs, and raising the depressed end of the bone to an equality with the other. This observation is equally applicable to the clavicle

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as to the hip and thigh." He also strongly urges the importance of fixing every fractured limb in such a position as tends to the greatest relaxation of all such muscles as by their contraction would displace the fractured bone. The general advice given by him can hardly be improved upon to-day.

There is no appliance so satisfactory to me as the plaster of Paris; but in all my cases of oblique fracture there is some shortening, and I am very strongly of the opinion it is inevitable—glowing reports to the contrary notwithstanding. It seems to me that extension and counter-extension, sufficient to certainly obviate any shortening, so impair nutrition as to endanger failure to unite. In other words, there must be firm contact of fractured ends in order to ensure healthy nutrition; and firm contact is hardly possible without a little slipping by. Dr. W. Hill reports to me fourteen cases of fracture of the femur, as having been treated by him since residing in Bloomington, in every one of which there is more or less shortening. A case occurred to me the past winter in which I was obliged to lighten my counter extending weight in order to get union, although measurement gave me exactly the same length in both limbs with the weight employed. I imagine a fractured bone can never be so skillfully treated as to be quite the equal of its fellow which has never received an injury; and yet the mass of mankind seem to expect this result, and, I am sorry to say, some members of the profession so talk as to indicate that this expectation is justly founded.

I show you a photograph of a limb run over by a street car, in which, as you will perceive, there was extensive sloughing of skin and integument, and in the centre of sloughed surface you will see the practical working of a skin graft, which, I am satisfied, shortened the time of recovery one-fourth, and left a much better surface than would have been possible without it. Very frequently, unsightly cicatrices might be prevented by this invention of our art, and certainly, so simple a process ought not to be neglected in cases appropriate for its trial. I have no means of knowing how generally skin grafting is employed; but, it seems to me, it does not receive that attention

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at the hands of the profession to which it is justly entitled, and, therefore, I would urge it upon you to give it a trial whenever opportunity offers.

The microscope is constantly revealing truths, hardly less important to surgery than to practical medicine. The discovery of parasites capable of producing surgical diseases, has been made since the last meeting of this Society, and from the researches of the microscopist, many leading surgeons have been led to adopt the use of antiseptic spray in all operations with the knife. The field of antiseptic surgery seems, just now to be a very inviting one; but, inasmuch as yon are to hear a report from one of your committee on this subject, I will not enter upon it; but, would simply say, after having tried the various antiseptics recommended, I have settled down upon two,—carbolic acid and sulphurous acid. Between these, either externally or internally, I have but little choice.

A member of this Society, having quite an extensive surgical practice, informs me that he has, a number of times, reduced inguinal herniæ, otherwise irreducible, by forcible dilatation of the canal with the thumb; and that he feels entirely confident of his ability to safely reduce any case that could be successfully operated upon with the knife. Another member informs me, that, failing in his efforts to reduce, in a case, he thrust nozzle of hypodermic syringe into the hernial sac, and thereby so relieved the distended knuckle of intestine as to be able to return it without difficulty. I notice a similar case reported in Braithwaite, in which the aspirator was used. I think there are many cases where such an expedient might be adopted without incurring any hazard worthy of note.

The profession very generally seem to have adopted the use of Esmarch's bandage, and I think, perhaps, without duly considering the possible hazards attendant upon it. All experience goes to show that if a part is entirely cut off from its supply of nutrient fluid for only a short time, death must inevitably be the result, and, furthermore, it seems to be possible that so much pressure may be made upon a part as to

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effectually paralyze all its nerves, and in this way, destroy its vitality. Through the kindness of Dr. Rankin, of Loda, I am able to furnish you with a report of a case occurring in his practice, which, to me, is full of instruction and caution. I give it it in the doctor's own language, premising it with the statement that the report would have been given to you a year ago, but for the fact that prudence dictated a due regard should be paid to what is known as the Statute of Limitations.

A CASE OF GANGRENE AND DEATH, RESULTING FROM THE USE OF ESMARCH'S BANDAGE.

About Jan. 1st, 1875, I was consulted, by some of our benevolent citizens, in regard to the feasibility of an operation to straighten the leg of a poor boy, who was suffering from a true anchylosis of the knee-joint, of some twelve years standing, and flexed well back on his thigh. The young man was very tall, and his unsightly appearance on our streets, walking about with his knees under his chin, caused the request above mentioned. After the operation had been thoroughly explained to the boy and his parents, and they had read all the authorities on the subject, and had voluntarily given their consent, I proceeded, Jan. 25, 1875, to operate, assisted by Drs. Booe, Balch and Bookwalter.

The patient was put under the influence of chloroform, and I applied Esmarch's bandage, and, in order to the better secure the femural artery, I carried the bandage up to Sharpie's triangle, and applied the rubber cord at the proper place for compressing the femoral artery with a tourniquet. I made an incision from the internal condyle of the femur forwards, across the ligamentum patellæ, until I reached the external condyle of the femur; the flap was quickly dissected up, and upon examination, no trace of the joint could be found; the patella was firmly attached to both bones.

A V shaped piece of bone, two and three-fourths inches, including the patella, was removed, allowing a small portion of each condyle to be broken down. Although the piece of bone looked large, when the leg was straightened, it was evident that not enough had been removed, and a half inch more

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bone was taken out, when the leg was brought into a proper position, without having to cut the hamstrings. With Brainard's bone-drill, the bones were wired on each side. The wound was closed with silver sutures, except the angles, which were left open for drainage, and for the removal of the bone sutures.

The limb was laid on a Liston splint, and suitably dressed.

Jan. 26th. Patient rested well through the night; pulse 90. A large quantity of venous blood had passed, and necessitated re-dressing. I had an anterior splint made to fit the leg, with a high arch over the knee, and had the limb suspended from the ceiling, with a weight and pulley.

Jan. 27th. Doing well; pulse 100; appetite good; bowels moved without medicine; no pain.

Jan. 28th. Still doing well; pulse 89. Up to this time, patient had not complained of pain, had no fever, and everything, so far as I could discover, indicated a speedy recovery.

Jan. 29th. I was summoned early in the morning. Patient had suddenly become delirious. Examined his foot, and found it cold and black, and removed the splint and dressings. The leg, to within four inches of the wound, was discolored, with a few watery blisters under the cuticle, which would slip, under pressure. The whole leg was cold, but the skin about the knee and on the thigh was natural in color, and I supposed that amputation would be all that was necessary. I sent for Dr. Booe and two students, and amputated above the knee, making lateral flaps.

On examination, I found that all the adipose tissue, from the skin to the muscle, was gangrenous, and a greenish fluid was escaping from its surface. I amputated again, making anterior and posterior flaps, and found the same condition. I took a scalpel and commenced an incision at the angle of the flaps, on the outside of the thigh, and extended it up the leg until I reached a point above where the rubber band had encircled the thigh. I found the tissues were healthy. I amputated high upon the thigh, and after removing some gangrene on the points of the flaps, I had a healthy stump.

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Throughout all this trying ordeal, he lost but little blood, though he came near dying from the effects of the chloroform, but was resuscitated by putting his head on the floor, with his hips still on the table.

Jan. 30th. Consciousness had returned during the night, and I yet had some hopes of his recovery.

Jan. 31st. Patient in as good condition as could be expected; rested well; pulse 103. Stump was dressed and looked well.

Feb. 2d. Pulse 130. Stump had swollen, and the swelling had extended into the bowels. Patient was unconscious and sinking, and died at 10 P. M. A careful examination of the limb revealed the fact, that, for about three inches above and below, and *in* the wound there was not a particle of gangrene, probably because there was but little adipose tissue about the joint. The wound had all healed by first intention, except where it was left open for the removal of the wires and for drainage. There was no gangrene above where the cord was tied, and as he had no pain in the limb, it must have been paralyzed from the time the bandage was applied. I do not think I applied the bandage more tightly than was necessary, as it slipped, and I spoke at the time of re-applying it. It was on but a very short time, only while I was tying the cord around the leg. Had I not used Esmarch's bandage, I think the operation would have been successful. There was no blood lost during the operation, except what escaped from the sawed ends of the bones. While operating, I thought Esmarch's bandage a great success, but the next day I was forcibly reminded of what I once heard Prof. Powell say: "Esmarch's plan is bloodless operating, but not a bloodless operation."

The above case was my first operation by Esmarch's plan, and I can assure you that it will be my last bloodless operation.

A. C. Rankin, M. D.

In contused, lacerated, or incised wounds, the hot water treatment, so far as I have observed, or can learn, has given very general satisfaction. In many cases its employment seems impracticable owing to the difficulty of keeping the in-

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jured part submerged; but where this is possible, in my judgment, it will give the best of results. On the 29th of September last, a boy 8 years of age, a son of Dr. Chapman, who lives near Kappa, had his left hand and arm, up to a little above the wrist, drawn into a a "sorghum mill." When extricated, those present say, "it seemed to be almost a pulpy mass," the skin was in shreds, the nails gone, and it was supposed all, or nearly all, the phalanges, metacarpal and carpal bones were crushed. The father who was away from home was soon found. He made the boy as comfortable as possible with anodynes, and enveloped the injured limb in cloths saturated with warm water. This course was continued for two days, when observing several gangrenous looking spots, Dr. C. sent for Dr. Kerr, of El Paso, who, upon his arrival, took an ordinary wash-boiler, and piled clothing in one end making a rest and support for the boy's arm, and filled the boiler with water at a temperature of 106°. It was then placed by the side of the bed, and the hand and arm nearly to the shoulder submerged in the water, which was kept at this temperature by keeping hot bricks under and around the boiler. Dr. Chapman supposing amputation inevitable, sent for me, and I met Dr. Kerr upon the occasion of his second visit. I found the boy feeling quite comfortable. The hand and fingers were swollen and stiff, but reported to be looking better than twelve hours previously. It was evident a general circulation was going on in them. It was agreed between us that as long as the general and local symptoms were no more urgent, we would defer any operation and continue treatment. I heard from time to time the boy was doing well. Dr. Kerr reports that he has recovered with a hand which will be quite useful. The thumb and middle finger to the second joint sloughed off, and the hand is thickened by interstitial deposit, which is, however, gradually being absorbed. The limb was kept in the water three weeks. Water was changed twice a day and temperature gradually lessened until during the last week it was maintained at 90°. I have no doubt any of you, seeing this hand at the time it was extricated from the mill, would have

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unhesitatingly declared that an attempt to save any part of it would be entirely futile.

There have appeared in the public prints within a few months, statements to the effect that two surgeons in this State—one now dead—had successfully removed portions of the intestinal tube. To a Kentucky surgeon, as far as I can learn, is due the credit of having first performed an operation of this kind. It happened to me about three months ago, to lose a patient with what I supposed to be intussusception. No autopsy was allowed. I imagine in every case of this sort there must necessarily be a feeling of doubt as to the exact correctness of the diagnosis. I had a strong desire, in this instance to open the abdominal cavity and remove the difficulty if found to exist as supposed; but my courage was hardly equal to the emergency, and I allowed my patient to die without making the proposition to him or his friends. I respectfully submit to this society the question: What is our duty in such cases? I feel myself incompetent to venture an opinion. Each advancing year is furnishing evidence calculated to lessen the fear heretofore entertained, in regard to opening into serous cavities. The peritoneum, especially, is much more tolerant of incised wounds than any surgeon could have been made to believe a quarter of a century ago. It is quite probable that most of the deaths following incisions into the peritoneal cavity have been the result of septicemic poisoning. rather than tissue inflammation.

On the 23d of February last, two brakemen employed on the Chicago and Alton Railroad, received comparatively slight injuries of the hand. In both, the skin and flesh was pinched up from the third phalanx of one finger. I remarked at the time, it was singular two cases so nearly exactly alike, should occur on the same day. Both men young, and apparently alike healthy. Both were strictly temperate and in neither was there discoverable any taint of the system. One of these men returned to his duties at the expiration of two weeks. The other was unable to work for seven weeks. Both were treated at first with simple water dressings to which a little

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carbolic acid was added. Both, as far as I could learn, took equally good care of themselves, and the surroundings of both men equally favorable. Now, why this difference in result? One was in a condition in which any wound or injury inclined to heal promptly; cut surfaces, if brought in contact would adhere by first intention. The other was in an opposite condition which for want of any other name I call *aphasia.* In this condition the blood seems to be deficient in fibrine and to have lost its plasticity. The condition is one frequently met; and yet, as a rule there is nothing in the general appearance of the patient to indicate it. The cure is found in the steady administration, for a longer or shorter period, of the muriated tincture of iron. I have thought it would be good practice to give this remedy—when practicable—for a few days prior to any operation with the knife. The not very scientific reason sometimes given for using homeopathic remedies would apply in this case. "It would do no harm if it did no good."

For a number of years the various committees of this society upon surgery have reported in favor of the use of sulphuric ether as an anæsthetic. Its relative safety should compel its use to the exclusion of chloroform; still, the latter is so much easier of administration, and so much more prompt in its action, that many use it regardless of its danger—or rather, perhaps I should say in spite of its danger—and will continue to do so until some of the objections to ether are overcome. In Braithwaite some writer recommends a combination with nitrous oxide gas, whereby a rapid effect is produced. The apparatus described is too complex for general use. There is a demand for something in this direction, and on general principles, we may expect the supply to be forthcoming.

At the last meeting of this society, Dr. Rankin made a few remarks on coxalgia and exhibited specimens of heads of femur removed by him. He took the ground that in all cases disease was the result of injury, and was not dependent on any scrofulous taint in the system. This idea was contrary to my education and preconceived notions. I have taken some pains

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to institute careful enquiries in all cases I knew of, and the result is different from what I anticipated, and is favorable to the view advanced by Dr. Rankin. "One swallow does not make Spring," neither do the half dozen cases referred to settle this question; but when a recent case again presents itself, I shall unhesitatingly employ a more vigorous antiphlogistic treatment than I would have done a year ago.

There seems to be a general inclination following amputation to dress the stump without sutures; or even adhesive straps—to make no effort to obtain union of any part by first intention. There can be no doubt but in many instances of death following amputation, the result has been due to poison imbibed from the stump. The general principle, that no purulent matter should be confined in contact with an absorbing surface, is unquestionably correct. All such matters should be allowed the first opportunity for escape. I have not adopted this plan of dressing a stump and therefore, as a member of your committee, cannot recommend it; but I consider the subject one worthy your serious consideration, and hope to elicit discussion upon it. Nothing new has come to my knowledge during the year in regard to ligatures and their uses. Torsion of an artery when it will accomplish the purpose, is to be preferred to *any* ligature, and its range of applicability is much greater than has generally been supposed.

On motion, the report was received.

Dr. J. S. Jewell.—There is one point mentioned in the report that we shall consider before acting upon it, and that is, cases of internal intusseption within the abdomen. I have had, within the last two or three years, seven cases of this kind. And, if I had them again, I most assuredly should operate upon them; because, in most instances, the patients will certainly die, unless something is done. It is the only possible plan for saving such cases.

Dr. E. Wenger.—I would like to inquire, would you remove the section of the intestine?

Dr. Jewell.—What I would do is what would seem necessary to be done, when the case came up. I should hope that the intusseption might be removed without taking out any portion of the intestine. But I should think the latter preferable to letting the patient die.

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Dr. Williams.—There is one point upon which the report on surgery was of more than ordinary interest to me, and that is in regard to dislocation, and fractures of the elbow—the position in which the arm should be put at the beginning and maintained.

Now, this thing has occurred to me, and Dr. White is cognizant of the facts. If the patient's arm had been placed at a right angle with itself, he would not have been able to maintain his family. I never will dress a dislocation with fracture in this position, fearing anchylosis. I am almost sure it will occur,

Dr. Wenger.—I am very glad to see a revolution taking place in the minds of surgeons upon this subject. I have been prosecuted, persecuted and hunted, for the last five years, for putting up an arm straight. It was a case of dislocation of both the bones of the elbow backwards. I am willing to admit that there is a good deal of dfficulty in making a correct diagnosis of the elbow joint, in some instances; in cases of dislocation of both bones backward, it is pretty plain. In that case, I decided that there was dislocation of both bones backward, and I reduced the dislocation. I knew that it was customary to put up such arms in a flexed position, and I undertook to adjust it in that way, but it would not remain. As soon as the arm was flexed the dislocation took place again. I then put up the arm straight. It resulted in anchylosis, and for that, I understand, the complaint is made against me. The case has been decided once against me in the Circuit Court of Kankakee county. I took it to the Supreme Court, where the verdict was reversed. I took a change of venue to Logan county, where I gained the case; and now the complainant has taken the bill to the Supreme Court, and I do not know where it will end. I am glad to see that the fashion is a straight arm.

Dr. E. P. Cook.—From the tenor of the report, and the remarks made since, it occurs to me that the subject of passive motion of the elbow joint has not been sufficiently considered. Cases of this kind require frequent and careful passive motion at more or less short intervals. I think their safety is in proportion to frequent passive motion.

Dr. S. B. Hawley.—The value of hot water in the treatment of dislocations seems to be established. I will not detain the Society long, but merely mention the case of a compound fracture of the metacarpal bones of the thumb. The thumb was placed in warm water, and when the patient wanted to sleep, the hand was wrapped in hot cloths. Under these conditions, a complete healing of the hand occurred, and a pretty useful hand resulted. We have, as surgeons, from time to time, to deal with cases of fractures of the ligaments about the ankle joint. The last two or three cases who have applied to me, I have ordered to apply hot water for six or eight hours each day. I now allude to cases where patients sit in rocking-chairs or lounges, or sit about the house for five or six weeks, where a large part of the foot turns black. The last five or six cases that I have treated, I have prescribed a hot water bath, about as hot

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as the patient could bear, until the skin has a slight washerwoman's soapy look, and have kept the foot in such a bath for a large part of the 24 hours. Three or four of these cases have got about comfortably in about a week. It is possible that the local capillaries sustain a higher temperature than those not subjected to such a bath, and that the temperature of the blood in them is maintained at a higher point than that of the general circulation, where the highest activity of the blood can be had.

The Secretary announced that Dr. J. L. Hayes, of Paris, had a report on opthalmology, and moved that the report be made the order for 3:30 P. M., on Wednesday afternoon. The motion prevailed.

On motion of Dr. N. S. Davis, the paper of Dr. Edmund Andrews, on the treatment of ankle sprains by pressure, was placed immediately after Dr. Wright's paper.

On motion of Dr. N. S. Davis, the paper of Dr. Wilbur, on Idiocy, was placed for 9 o'clock, on Wednesday morning. The Society then adjourned, to meet at 9 A. M. to-morrow.

WEDNESDAY.

The President called the Society to order at 9 A. M.

Dr. C. T. Wilbur, of Jacksonville, read the following paper on Idiocy.

REPORT ON IDIOCY.

BY C. T. WILBUR, M. D.

While it is conceded by the most eminent alienists that insanity is in a very small percentage of its cases curable (only twenty per cent. of the cases admitted to insane hospitals), the statistics of the institutions for the custody and education of feeble-minded children, are developing the fact that a very large proportion of the pupils admitted to such institutions, are capable of very considerable improvement.

About one-third of the idiots admitted to the institutions, by a few years of education and training are improved to such an extent, that they can be employed in useful occupations, and cease to be recognized as persons belonging to that class.

Another third, who would always be a burden to society

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without the influences brought to bear upon them in establishments designed for their instruction, are so developed that they are able, in a very considerable degree, to care for themselves.

Only a very small proportion of the idiots, as they are found in society, are so low in the scale that they cannot be very much improved.

The Charity Organization Society of London, which is composed of some of the most eminent men of England, has been considering for several years the best means of making a satisfactory provision for idiots, imbeciles, and harmless lunatics, and have made a very valuable report in 1877, of the conclusions arrived at by them after a very careful investigation of the subject.

They have recorded their opinion in the following general principles of treatment:

1st. That idiots and imbeciles should be treated distinctively from other classes.

2d. That they ought not to be associated with lunatics in asylums.

3d. That they ought not, unless in exceptional cases, to be associated with paupers in county poor-houses.

4th. That the distinctive treatment suited to idiots and imbeciles ought to be applied collectively, espeeially. in the earlier stages of education.

5th. That they cannot, with advantage, be placed in ordinary schools with other children.

6th. That the improvement of idiots and imbeciles would not be promoted by boarding them out, in private families.

7th. That the education of this class should be based on physical considerations.

8th. That their education should commence at the earliest age at which they can dispense with a mother's care, and the subsequent stages should depend upon the capacity developed by them.

9th. That they should have a thorough industrial training, so as to enable them, as far as practicable, to support them-

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selves, or at least to contribute toward their support, when circumstances render it necessary.

10th. That idiots of all classes should, as far as may be prudently done, be also encouraged to cultivate any literary, scientific or artistic, or mechanical faculty they may happen to possess, or be otherwise furnished with employment, so as to promote their self-respect, and to make them feel that they are of some use in the world, or at any rate, to occupy them pleasantly.

The basis of all treatment must be medical, and with this should be combined suitable physical, moral and intellectual training.

In other words, instead of trusting to the every day experience of ordinary life for their gradual development, the senses of imbecile children must be cultivated by a specific system of education before any other improvement can be attempted.

Their lessons should be of the simplest kind at first and gradually cumulative.

They must be taught, individually and collectively, to dress and undress themselves; to acquire habits of order and neatness; to use the spoon or the knife and fork; to walk with precision and to handle with tact.

Those defective in speech, should be exercised in articulation.

The report emphatically states that "the benefits to be derived, even in idiot cases apparently hopeless, from a distinctive system, and from persevering endeavors to develop the dormant powers, physical and intellectual, are now so fully established that any argument on the subject would be superfluous."

In England, asylums for idiots have all been built and supported by voluntary contributions.

The Society, in considering the question whether private charity could be depended upon for the education and care of the imbecile class, arrived at the following conclusions:

"Voluntary charity has directed attention to the claims of this neglected class, and made great progress towards the

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establishment of a model for general adoption; but it has not proved equal to providing a remedial machinery coextensive with the evil.

"Adequate provision for all of the poorer classes, whether juvenile or adult, cannot be made without the intervention of the State.

"Afflictions of this class cannot be comprehensively and effectually dealt with otherwise than as a common burden by public administrative arrangement.

"As they prevail in a certain fixed ratio to the whole population, the means of mitigation or remedy should be provided generally throughout the country. They also affect all classes of society in nearly an equal degree; so that while the removal of an imbecile member of a struggling working-class family is a necessity, there is no family so wealthy as not to be interested in the elucidation of the best methods of treatment.

"The machinery required to provide for this class of cases is also so expensive, and so dependent for its efficiency upon proper organization and inspection, that, although much incidental aid may be obtained from private benevolence, the necessary buildings and establishments cannot be set up and maintained in working order by any power short of that of the entire community, every member of which has a personal interest in the absence of the painful and demoralizing spectacle of the neglected idiot, and in the knowledge that he is properly cared for and improved to the extent of his capacity.

"The education of idiots is more expensive than that of any other class of children, and the object in view is even more urgent.

"It has been truly said, that there is as much difference between a trained imbecile and an untrained one, as there is between a civilized man and a savage. The expense of training juvenile idiots is also greater than that of maintaining adults, owing to the nurses, attendants and teachers required for the young.

"*Separation* of any dependent class from the ordinary life or circumstances of the community, *does not increase* the cost of its maintenance, but should *reduce* it to its minimum.

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"Adult idiots should be congregated, and trained to useful labor, and thereby reduce the cost of their maintenance."

The State of Illinois has recognized the value of education for this class of children.

A new building has just been completed at Lincoln, calculated to accommodate 300 pupils.

School will begin in the new establishment about the first of October of this year.

One hundred and fifty new pupils can be admitted, probably this fall.

The physicians of the State who are consulted concerning children of this class, can obtain what information they desire upon the subject by addressing letters to me at Lincoln.

The last report of the asylum, will be sent to any physician, desiring a copy of the same.

Dr. J. H. Hollister moved that the report be accepted and referred to the Committee on Publication.

Dr. Worrell.—We have been highly entertained by this gracefully written and carefully prepared paper, containing, in brief terms, some of the most practical suggestions that refer to the objects and management of the institution, whose existence in perpetuity, the medical men of our State will surely foster.

Dr. H. Steele.—I think it is a good report. I have had some expeperience in Jacksonville, and I would not have believed what has been accomplished until I saw it. It is an excellent report.

Dr. W. L. Goodell.—I am glad there are facilities for taking care of such persons as are not able to take care of themselves. In our county we have two such persons. We endeavored to get them a place in the State institution, to have them treated there, but they were refused. Such people should be separated from the paupers of the county. The county house is not a proper place for those who are affected in their minds.

The motion of Dr. Hollister prevailed.

Dr. Davis moved that a recess of five minutes be taken, in order to make up the nominating committee. After some discussion, an amendment was offered by Dr. Pierce, fixing the time for choosing the nominating committee at a quarter before one o'clock. The amendment was accepted by the original mover, and the motion, so amended, prevailed.

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The President announced the presence of Dr. W. F. Peck, a delegate from the Iowa State Medical Society, and invited that gentleman forward to the platform.

Dr. Peck said he was here as a learner, and to see how the profession of Illinois compares in progress with that of Iowa.

The President said he had been in attendance upon the Iowa Society's sessions, and the Illinois Society was always glad to welcome delegates from that State, as well as from other surrounding States.

The Assistant Secretary, Dr. Earle, announced Dr. Edward L. H. Barry as a proposed member. Referred to the Board of Censors.

The Assistant Secretary, Dr. Earle, read a list of the delegates registered up to this time.

Dr. Plym S. Hayes then read the report of the Committee on Electro Therapeutics, as follows:

REPORT ON ELECTRO-THERAPEUTICS.

BY PLYM S. HAYES, M. D.

[Professor of Chemistry, Woman's Hospital Medical College, Lecturer on Chemical Physics, Rush Medical College, etc., etc.]

This year we cannot report such marked improvement in the construction of electrical apparatus as we have been able to in years gone by.

The improvements of this year consist almost wholly in the improved construction of the apparatus for increasing and diminishing the number of elements used, and in the great variety of ways the elements may be connected to obtain effects of quantity or intensity.

In the galvano-caustic apparatus devised by Dr. Byrne, there have been several improvements. These consist of substituting for the carbon plates, plates of platinized lead, and, without increasing the size of the battery, of making it a battery of four elements, in place of two. The latest improvement consists of certain metalic plates connected with the electro-positive and negative plates of each element in such a manner that we can convert the battery, by turning milled-

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headed screws, into a one, two, or four, element battery; and in each instance use the whole number of elements forming the battery; or, we can use one, two, three or four elements, by again changing the screws getting the current, in this case, first from a single element, second from two, then three, and four in succession.

From past experience, I should be inclined to consider this last described attachment a detriment, rather than an advantage, for the reason, that, should the surgeon who uses such an instrument, not be well versed in the practical working of the battery, its construction, and the reasons for the changes, he will find that he is constantly in trouble, for, from the simple jarring of the battery, as it is being carried from place to place, the screws which make the connection may become turned so they just escape the metal plate they should touch, and, consequently, interrupt the current. Should a person unused to the construction of the battery try to put it in order, he would be as likely to close the circuit, as to set right that which was wrong.

Within the past year, I have had manufactured to my order a cabinet battery, which gives me great satisfaction. In this battery, the poles from each element are brought to the top of the cabinet, where they terminate in two rows. One row consists of the positive, and the other of the negative, poles. By means of metalic springs fastened to bars of wood, I am able to change the battery from a thirty element battery to one of any number of elements, which number will evenly divide thirty. A metalic slide, which presses on the springs, enables me to increase or diminish the current, one element at a time, with the greatest ease and dispatch.

I have thus been able, by the changing of a bar, to use the same battery, as a single element for generating the induced current, or as a thirty element galvanic battery.

The Leclauché element, so highly praised for medical use, has been improved by cementing the pyrolusite and carbon by the addition of a small per cent. of rosin, and inserting a cylinder of the bi-sulphate of sodium in this electro-negative

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plate, to prevent the formation of an insoluble "oxychlorate of zinc," which, without the sodium salt, would be deposited in a crystalline form on this plate.. This device dispenses with the porous cup, and, consequently, lessens the intrabatterial resistance.

Dr. M. Foster and Mr. A. G. Dew-Smith have made some experiments, tending to show the physiological action of the galvanic current on the heart, both when applied directly to the muscular tissue of a ventricle, and by excitation of the par vagus.

The hearts employed were those of cold blooded animals; viz., frogs, toads, tortoises and dog-fishes. The lower two-thirds of the ventricles was the portion of the heart muscle used, when the current was applied directly. If a weak current was used, there was either no muscular contraction produced, or it was only produced at the moment of making or breaking the current, the muscle remaining quiescent during its passage. Thus far, the cardiac tissue comported itself in direct accordance with Pfluger's well-known law. But when stronger currents were used, rythmic pulsations were produced, commencing with the closure of the current, continuing with its passage—the previous quiescent period—and ceasing when the current was broken. If the current was increased, the number of the rythmic contractions were increased, but, under no strength of current, would tetanic contractions be produced, as they are in the striped muscle, with similar currents. From these experiments, and those they performed on the vagus, they conclude that all rythmic pulsations are due to the action of the constant current on the muscular tissue of the heart; further, they believe that the vagus, when stimulated, acts on the muscular tissue of the heart itself, as does any other nerve, under like circumstances, act on the muscle to which it is distributed. They, therefore, think the ganglia play an unimportant part in the production of the heart's spontaneous rythmic pulsations, and they hold that the vagus, when stimulated, does not inhibit the heart's action through the ganglia, but by influencing directly the

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cardiac muscle.—*London Medical Record*, Oct. 16th, 1876.

Two observers, Dr. Drosdoff, of St. Petersburg, and Dr. Abramowski, of Berlin, have published the results of treating a series of cases of acute rheumatism, by means of the induced current.

Dr. Drosdoff states that the electro-cutaneous sensibility over the affected joints is diminished, while Dr. Abramowski states that it is increased. These two diametrically opposite results were undoubtedly obtained by the difference in the mode of applying the current. The first mentioned physician made use of moistened sponges for the direct application of the current, while the last mentioned used an electrode in a moistened sponge, and applied to some distant part of the body, while over the affected joint he applied the negative pole, by means of a metalic brush. The results which followed the treatment in each case coincided. Dr. Abramowski reports fourteen cases.

He treated his patients from ten to eleven, A. M., the treatment lasting from ten to fifteen minutes. The results were noted at four P. M. At this time, in many of the cases, they could move their limbs with comparative ease, and would allow the joints to be handled, whereas, in the morning they shrank from the slightest touch. Some of the cases required repeated applications, before they were as readily relieved as the cases just mentioned. Repeated treatments were required, before permanent improvement resulted. The temperature rose and fell with the increase and diminution of the local symptoms. The average length of time required for treatment was ten days. Relief came soon after the application, and lasted for several hours.

I have obtained similar results in cases of acute rheumatism, both by the local application of the induced current, and by the more general electrization, by means of the electro-thermal bath, in connection with the local application. This latter mode gave greater relief, was more efficacious, and was much more pleasureable to the patient, than the former.

I have recently had under my care a case of rheumatic gout,

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in which I used the induced current. The following is a synopsis of the case:

Mr. B., aged 45, of nervous, sanguine temperament, a native of England, though thoroughly Americanized by his long residence in this country, came to our office a year ago, suffering from the effects of a recent attack of rheumatic gout, which had left him with enlarged and painful phalangeal joints, and weak and painful knees and ankles.

The electro-thermal bath was prescribed, and by this means, both the galvanic and faradic currents were applied generally and locally. After six or seven treatments, he was so much relieved, that he discontinued the treatment, although several of the phalanges were somewhat enlarged.

The first of last March, he again presented himself for treatment. He was suffering with all the premonitory symptoms of a new attack. The bath was again administered for three or four successive days, then, from the inclement weather, he was unable to come to our office, and I attended him at his home. I usually visited and treated him at five P. M., in order that he might pass a more comfortable night, for I found the treatment invariably gave him a period of relief.

During the thirty days he was confined to his house, it was not necessary for him to take any anodyne or hypnotic, and, with the exception of two or three nights, slept well. During the first fifteen days, he was given tincture guaiac. and tincture phytolacca, and compound liquorice powder, as the occasion required. During the last part of his sickness, the treatment was reinforced by tincture colchicum and iodide of potassium. This attack was much less severe than any he had ever experienced, and his recovery was more rapid than at any former time.

The experience of Drs. Drosdoff and Abramowski, as well as my own, plainly indicate that we have, in electricity, a valuable auxiliary in the treatment of rheumatism. It is also shown, that we may use a moderately strong induced current, over the inflamed joints, without danger of increasing the trouble, but rather of alleviating it, and this in direct opposi-

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tion to the teachings, which have been advanced, that it is not a good thing to use electricity in recent inflammation.

Dr. Furstner (*Berliner. Klin. Wochensch.* for March 13th, 1876) reports three cases of distention of the stomach relieved by the application of the induced current. The cases were those of young women. Each was caused by a blow on the epigastrium. In each case there was a rapid development of hysterical symptoms, and periodical fits, preceded by distention of the stomach. Each case, after the failure of other remedies, was immediately relieved by the application of a faradic current of moderate strength. One electrode, enclosed in a moist sponge, was placed on the left hypochondrium, and the other, similarly prepared, was placed over the stomach, and slowly carried, with considerable pressure, from the cardia to the pylorus. Dr. Furstner attributes the result to contraction of the walls of the stomach, caused by direct, and not reflex irritation; since, in several patients, whose stomachs he artificially distended with carbonic acid gas, he found the swelling was more easily reduced by the firm application of moist electrodes, than when the skin was more directly irritated by a dry metalic brush. He suggests the use of the induced current in other forms of dilated and distended stomach.

Within the last few months, there have been two works published on the electric bath. It will be remembered that at the last meeting, I gave a brief account and history of the electro thermal bath. This, together with two or three articles, which have appeared in some of the medical journals, was the only literature on the subject. These two monographs were issued within three months of each other. The one, entitled The Electric Bath, by Dr. Schweig, of New York, was issued first. The bath apparatus described by Dr. Schweig is comparatively crude.

The other, The Electro Thermal Bath, by Dr. Justin Hayes, of this city, describes a much more elegant and complete form of apparatus. These works fill a place in medical literature, to which there have been few allusions in our standard works.

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The use of electricity in the bath is becoming more extended every day, and as the administration of electricity by the bath may do great injury or good, according to the way it is administered, this mode of treatment must necessarily be in the hands, and under the control, of a competent physician.

Operations by electrolysis are each year more common, partly for the reason that so many physicians possess a galvanic battery, and partly, because many patients dread the knife, and would rather undergo any operation which gives, even the slightest promise of success, than submit to the knife.

The following abstract on the Electrolytic Treatment of Tumors, by Dr. Julius Althaus, is so complete that I have taken the liberty to reproduce it.

"1. *Nævus.* It is most frequently found in the face and on the scalp, and electrolysis is the most appropriate means for its romoval. It is superior to excision, because there is no hemorrhage; to injections of sesquichloride of iron, because it does not endanger the life; to the cauterization by nitric acid, because it can be localized better; to subcutaneous ligation, because after the operation, the child has no pain and the surgeon has no further trouble; over the galvanocaustic, because it does not leave any scar. The ordinary round, small and thin nævus usually yields to one single application, while the larger 'portroine stains' require a number of sittings.

"The current acts through needles, which, set in rows, and connected with the poles of ten to fifteen Danill's elements, are thrust into the tissue of the nævus. As soon as the chain is closed, the destruction of the texture begins with the blood-vessels, and the integument of the nævus appearing to wither. The destruction being more thorough around the positive pole, this must always be applied to the worst portion of the nævus. Usually, not a single drop of blood is lost; if, however, by any sudden motion of the patient, a needle should come out, and a drop of blood should appear, this can be coagulated at once and any further bleeding can be prevented by directing the positive pole to the puncture. When all the morbid tissue to be destroyed has been acted on, the current is interrupted and

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the surface of the nævus is covered by a piece of gold beater's skin. No further dressing is necessary because the surface remains dry. The eschar is thrown off after about ten or fourteen days, and the surface gradually assumes the appearance of the neighboring integument.

"2. *Goitre.* The writer considers electrolysis as especially applicable to the cystic goitre, because it occasions neither pain nor danger. The best *modus operandi* is to introduce two or three needles into the cyst and to connect the same with the negative pole, while the positive electrode is applied to the integument by means of a wet sponge. Through the electrolytic action, caustic soda is created out of the solution of chloride of sodium contained in the cyst. This caustic soda cauterizes the secretory lining of the cyst and stops any further secretion. Two to six applications usually are sufficient. In the treatment of parenchymatous goitre, the author combines the electrolysis with injections of tincture of iodine into the tissue of the goitre. These parenchymatous injections break up the texture of the tumor and thus the combined method shortens the time of the treatment quite materially, especially if the goitre is old and rigid.

"3. *Sebaceous Tumors.* They can easily be excised; but many patients dreading an operation, and the excision being occasionally followed by dangerous, even fatal, erysipelas. Althaus advises the use of electrolysis, which will remove these tumors without danger and without leaving a scar. Both electrodes are put into the tumor to have a quick result.

"4. *Carcinoma.* The writer advocates the early and thorough extirpation of every primary cancer. But in cases of secondary carcinoma, the electrolysis has often done good service. It cannot, of course, eradicate the cancerous diathesis, nor prevent the fatal termination, but is very efficient in allaying those lancinating pains, in procuring sleep and comfort to the patient." (*Chicago Medical Journal and Examiner*, August, 1876.)

The following case of occlusion of the nasal duct relieved by electrolysis, I had supposed, to within a few days, to be the

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only case of the kind. I have found, however, that this operation has been performed by Tripier, but I have been unable to find any detailed description of the operation.

Mrs. S. had occlusion of the nasal duct, following irritation occasioned by the use of a stylet, and a severe cold. She applied to Dr. E. S. Holmes, who after repeated attempts failed to pass the probe. At this she became discouraged, and was about to return home, when Dr. Justin Hayes suggested that electrolysis be tried. On consultation it was decided to make the trial. A No. 6 silver probe, connected with the negative pole of a thirty element specific gravity battery, was engaged in the upper portion of the duct, Dr. Holmes manipulating the probe. The positive pole was applied to the right hand, by means of a moist electrode. The current was applied for three minutes, the probe in the meantime entering the canal, about one-fourth of an inch. This electrolysis was repeated three days in succession. At the third operation the probe passed into the nasal cavity. The probe was now passed daily, and Dr. Holmes instructed her sister in its use. We have heard from the patient since her return home. She says the probe is passed without the slightest difficulty. Mrs. S. said the electrolysis did not pain her as much as did the attempts to pass the probe before the electrolysis was performed. The attempts to pass the probe were followed by a slight hemorrhage, while the electrolysis was bloodless. Where the probe pressed the skin against the supra-orbital ridge of the frontal bone, electrolysis also took place, although there was no break in the cuticle. This occurred at the first operation, and was obviated at the subsequent operations, by insulating the probe with a piece of thin rubber tissue. I mention this, in order to refute the opinion, which has been advanced, that when electrolysis is being performed should the pole which antagonizes the one that is used for the electrolysis be so placed that the sound, needle, or other electrolytic instrument, if pressed directly through the tissues, would come in contact with this antagonizing pole, the electrolysis will take place only at, and near the end of the electrolytic instrument. The case mentioned does not coincide

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with the statement made above, for electrolysis was not only performed in the moist tissues at the end of, and around the probe, but also took place where the metal came in contact with the dry skin, which, on account of its dryness ought to have served to insulate—in part at least—the underlying tissues from the action of the current.

Recently the galvano-caustic apparatus has become so simplified, cheap and portable, in comparison to what it was only a few years ago, that many of our surgeons, particularly, those who practice gynecological surgery, have added a caustic instrument to their armament.

I find in the recent literature on the subject, the report of three cases in which the cautery has been used, where it would seem to be almost next to impossible to have performed the operations without it.

The outlines of the cases are as follows:

Removal of a Naso-pharyngeal Tumor by the Galvano-cautery, by Dr. James L. Little (Reported in the *Archives of Clinical Surgery*, July, 1876).

Examination shows a large tumor projecting from the pharynx into the mouth, carrying forwards, on its upper surface, the soft palate, so that the uvula points directly forwards. The tumor completely fills up the space behind the soft palate. The patient, with his mouth closed could not blow through his nose. Microscopic examination showed that it consisted of inflamed fibrous tissue.

A portion of the left superior maxillary bone was removed. A platinum wire was then, with some difficulty, passed around the mass, and pushed down as nearly as possible to its base. The wire was then connected with Middledorpf's electrode which was in connection with one of Byrne's galvano-cautery batteries. By this means the greater portion of the tumor was removed without loss of blood. The remaining part was found to be freely movable, being attached from the basilar process of the occipital bone, to a point as far down as the third cervical vertebra. This portion was detached by a pair of curved scissors, and the slight hemorrhage which followed was controlled by the galvano-cautery.

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The mass which was removed weighed two ounces. The patient sank suddenly, and died the next morning. This result Dr. Little attributes to the extreme weakness of the patient, for the tumor impeded normal respiration, and prevented proper nourishment of the patient. The operation was one of necessity.

Case of Congenital Hypertrophy of the Tongue Relieved the Galvano-Cautery—Valerani.

The case was that of a child two months old. The enlarged tongue not only disfigured the child, but prevented its properly grasping the mother's nipple, and also caused a constant flow of saliva over the lips and chin. The tongue could not be crowded back into the mouth.

The extra-oral portion of the tongue was surrounded with a platinum wire, and removed by the galvano-cautery without the loss of a drop of blood. The result was so pronounced that after cicatrization it would not have been suspected, even after an examination of the tongue, that a portion of it had been amputated.

Extirpation of the parotid gland by the galvano-cautery.

Prof. Carradi diagnosed a cancerous tumor of the parotid gland. It was decided to remove the gland by means of the galvano-cautery, in order to avoid hemorrhage, and have the field of operation clear. A vertical incision was made, extending from the zygoma to a point below the angle of the jaw, being almost half an inch in front of the attachment of the external ear; a second incision started from the lower angle of the masseter muscle, and reached the mastoid process. These cutaneous wounds having been dried, a steel knife, made white hot by the galvanic current, was employed, and the whole gland was separated from the surrounding tissues, from below upwards. During the last part of the dissection, the external carotid having been exposed, two ligatures were applied and the vessel divided.

At the end of twenty days, the patient was well. There was paralysis of the left side of the face. The tumor, which proved to be scirrhus, returned in the left lateral region of the neck.

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The last point to which I would call your attention, is the explanation of the fact that the galvano-caustic wire, as a knife, or of other convenient form, when at a white heat, cuts without the disorganization about the region of the incision, and the surely sealing of the blood vessels, as is the case when the caustic instrument is of a dull red heat.

The only explanation I have been able to find advanced, is that the heat is so great that it cuts through the tissues with such rapidity that the albuminoids of the tissues are coagulated only to a very slight extent, and not sufficiently to prevent hemorrhage. While the rapidity of the cutting has weight in explaining the fact, yet, to my mind, it does not give a full explanation. There is an element of truth in it, but it is not the whole truth.

The history of the ordeal by fire gives us examples that may be of use in the explanation. There are recorded instances of persons having carried for some distance pieces of iron heated to redness, or of having walked over coals of fire, without having been burned. These cases, incredulous as they may seem, have been further verified in the more recent experiments of conjurers, who have taken molten metal in their hands, or have stirred with a finger, or plunged the whole hand, into the molten metal in the crucible, without injury. When we examine these facts, with the critical eye of science, we find an explanation, which at once robs these phenomena of the miraculous cloak with which they are surrouded. It has been proven that when a drop of water is placed on metal heated to incandescence, the drop assumes the form of a flattened sphere, and instead of resting on the metal, is separated from it by a space occupied by a cushion of watery vapor. The temperature of the drop is below its boiling point. Should the metal become cooled to near the boiling point of water, the vapor cushion is no longer formed, and the drop spreads itself on the metal, only to become almost instantly converted into steam. This explanation serves, for the ordeal by fire, and the conjurer's trick, as well as for the drop of water. In these instances, the natural moisture of the hands or feet, as the case may have

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been, furnishing the water for the vapor cushion. If, in the conjurer's trick, the hand was not moist enough, it was wiped with a moistened towel, so that when plunged into the molted metal, it did not come in contact with the metal, but was separated from it on all sides by a layer of vapor.

The knowledge of these facts made me think, as I was using the galvano-caustic, and explaining its workings to a class of students, that an important factor in the explanation of the action of the platinum wire at a white heat (1500° c) had been overlooked. The explanation I offer, is that when the platinum at a white heat is brought in contact with the tissues, a part of the fluids of the tissues, immediately surrounding it, are at once converted into vapor, which no longer allow the tissues to touch the platinum, and which, on account of its poor conducting property, does not allow the tissues to become charred.

It may be urged by some, that if the spheroidal condition is an important factor in the explanation, the rapid cooling of the platinum when used on the dryest tissues argues against it. The platinum knife, at a white heat, when brought in contact with the tissues, apparently divides them before it comes in contact with them; this is true only at the first instant, for from the work that has been done, there has been a consumption of heat, and the loss is greatest on the edge of the knife, and as the knife is still held in contact with the tissues, the cooling spreads from the edge towards the back of the blade, until the knife may only be of a dull red heat, or the temperature may be even lower. When this latter fact exists, the vapor no longer protects, and the tissues are deeply disorganized. Should the electricity be increased, after the knife is in contact with the tissues, the heat may be maintained at the same temperature it was when the knife was first applied. The same effect may be obtained if, after touching the tissues, the knife is removed for an instant, the current in this instance remaining the same.

The disappearance of the heat is due to the imparting heat to the tissues, and the loss by radiation. The cooling of the

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platinum makes it a better conductor, so that a stronger current is required to maintain the same temperature in the tissues as was maintained out of them.

The explanation, then, of the action of the galvano-cautery, when at a white heat is, first, the rapid action on the tissues causing them to quickly separate before the cautery instrument, and second, the surrounding of the knife with a layer of watery vapor, which, in itself, is a poor conductor of heat, and consequently acts to insulate the tissues from the heated platinum.

Dr. R. C. Hamill, of Chicago, moved that the paper be accepted and referred to the Publication Committee, and the motion prevailed.

Dr. N. S. Davis.—I would like to call upon the special committee on Malaria, of which Dr. John Wright, of Chatham, is chairman.

Dr. Wright.—I shall have to ask the indulgence of the Society for another year. I have made some progress, but not enough to make a report. I ask the privilege of being continued another year, and I will promise something worthy of your attention.

The matter was referred to the committee on nominations, on motion of Dr. Earle.

The Secretary called for the report of the special committee on Diagnosis and Extirpation of Tumors, Dr. W. L. Goodell, of Effingham, chairman.

Dr. Goodell said he was not prepared to make the report at present.

When the committee on Necrology, Dr. G. W. Albin, of Neoga, chairman, was called, Dr. J. Adams Allen responded that he was prepared to report as to the death of Dr. J. W. Freer.

On motion of Dr. N. S. Davis, its reception was made the special order for Thursday, at 9:30 o'clock, A. M.

The President stated that he had a note from Dr. W. H. Byford, chairman of the committee on Obstetrics, expressing regret that he was unable to report this year.

On motion of Dr. N. S. Davis, the voluntary report of Dr.

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E. L. Holmes was made the special order to follow the remainder of the report on Surgery, at 4:30 o'clock.

The Assistant Secretary announced the names of Drs. Henry R. Filley, and C. L. Taylor, of Winnebago Co., recommended for membership. Referred to the Board of Censors.

Dr. B. M. Griffith, chairman of the committee on Drugs and Medicines, read the report of the committee, as follows:

REPORT ON DRUGS AND MEDICINES.

BY B. M. GRIFFITH, M. D., SPRINGFIELD.

To the Illinois State Medical Society:

MR. PRESIDENT AND GENTLEMEN OF THE STATE MEDICAL SOCIETY.

"From the time, when the memory of man runneth not to the contrary," drugs have been administered for the relief of the suffering and cure of the sick.

In the primitive ages, the potency of the medicine man was acknowledged, and his aid sought to mitigate and cure disease.

Ages elapsed, however, before any attempt at classification, of either remedy or disease, was had, the treatment being traditional and empirical, it required time, patience, and untiring zeal in observation and analysis of signs, symptoms, and the results of treatment to overcome the early habit of prescribing empirically, and establish a system of therapeutics and pathology on an intelligent basis.

The nomenclature of the pathologist of the present day, though rational, and on a scientific basis, is far from perfection.

I shall not, in this report, attempt the herculean task of the history and description of drugs and medicines, but avail myself of the scope given to the subject, and simply call attention to some of the improvements in these agents, and contrast the advantages possessed by the present physician and pharmacist over those of any former period, and content myself by the mention of a few new remedies at its close.

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In the many and valuable works on materia medica and new remedies, will be found interesting details of history, habit, preparation, discovery and use of new remedies, as well as those of tried value, from which each can cull sufficient helps to compass the end of this work. I purpose, in this report, to speak of the every-day interest and work of the practitioner, in relation to this subject of drugs and medicines, not usually found in the text-books, yet pertinent to the drug question.

It is difficult for the practitioner to divest himself of the traditional superstitions of the elder Galens, and administer remedies upon rational and scientific principles. His education and training may teach him that the rational method is the only philosophical and satisfactory one, and *too*, the only system to be relied upon, but in spite of his reasoning and the truths learned in physiology, therapeutics, chemistry and pathology, the original sin asserts the mastery, and he gives calomel in jaundice, and astringents in dysentery. "He still continues to warm the ax that made the wound, and keeps the ax well oiled, that the wound may heal."

The exhibition of drugs in the treatment of disease, *is* somewhat *empirical*, and necessarily so. It is impossible from the physical appearance, habits, and chemical constituents of any plant or mineral substance, to say positively its therapeutic value, or classify it as a remedy. Its botanical history and chemical constituents may give the direction, or a hint may be taken as to its value and application, but it remains for the clinic to test and verify the value, and properly place it as a remedy. All bitter substances are not antiperiodics ; all antiperiodics are not bitter. All hemostatics are not astringents; all astringents are not hemostatics.

Quinine was a long time given empirically, only antiperiodic virtues ascribed to it, and it was then considered a specific in intermittent or malarial fever, on the principle of antagonism, but when the pathology of the diseases in which it was taken, with such good and positive effect, were more strictly observed, it led to better results, and quinine was found an efficient and valuable remedy in many diseases, especially those wherein

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capillary congestion exists. Its scope of usefulness was greatly enlarged, and by analogy it was found an appropriate remedy in pneumonia, catarrhal fever, rheumatism, dysentery, diphtheria, etc., etc.

Ergot, too, until a recent period, was misinterpreted, and had a limited scope of usefulness, only being given in parturition, miscarriage and dysmennorrhœa, under the mistaken impression that it acted only by inducing contractions of the uterus. Since investigation into its action, the effect of ergot is better understood. The most prominent features of its action are its *hemostatic* effect, and a peculiar effect on the *spinal nerves, equalizing* the circulation, hence its value in uterine hemorrhage, hemoptysis, spinal-meningitis, headache, etc., etc. So, by slow approaches and gradual ascent, we are enabled to pass therapeutically from empirical to rational and scientific exhibition of drugs.

The native gives Bourbon and Peacock, in snake bite, as a specific, empirically. The scientist offers a rational conclusion why it should be given, upon physiological and philosophical deductions.

Chemistry, botany, physiology and pharmacy are progressive sciences, and have made many and great improvements in drugs and medicines, not only in the mechanical preparations to facilitate and make pleasant their administration, but the list of remedial agents is greatly enlarged and bettered. Since the last edition of our Pharmacopœia, many new and valuable helps to the practitioner are used, which are not officinal, though as well authorized and thoroughly sound in efficiency for the treatment of disease as the most orthodox remedy recorded. They have passed the ordeal of the clinic, been verified by the crucial test of the practitioner, and richly deserve a place in the list of remedies. Practical medicine has made greater advances in the present century than any other similar period.

The brilliant discoveries in chemical science has made clearer and more comprehensive than before, the process of nutrition, respiration, calorification, secretion and excretion. The discovery of oxygen by Priestly, in 1772, was a grand era in chem-

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istry, and brought to the aid of the investigator of chemical science, a power little dreamed of by the most enthusiastic devotee. This element is the key in the arch of nature's combinations, and its discovery led to the analysis of many mysterious conditions, as it seemed the combining *link*, the lever which opened the seal of secrecy, the cypher by which many things unexplained could be wrought out and made plain. It was the opening wedge to future investigation, as the key of *explanation* had been found.

Experimental physiology, aided by microscopy, the increased attention paid to cell growth, development and repair of tissue, the exalted vital action, the inflammatory process, the improvement in diagnosis by chemical analysis, by acoustics, by the aspirator, led to new ideas in pathology, made new theories of disease, and new theories of the action of medicines, revolutionized the nosology, and reconstructed therapeutics. At this *era* of advanced knowledge of disease, began the rational and scientific exhibition of drugs, as the improvement in material and method must keep pace with the progress in correlative branches of medical science.

Science deals in facts, the scientist accumulates, classifies and deduces; medical philosophy is the explanation of these truths, the *modus operandi* of causes in producing results. These methods of investigation have not been pushed solely in the direction of physiology and pathology, but have taken a wide and comprehensive range. The same method, so efficient to discover and explain disease, has contributed greatly in turn to develop a remedy to correct the diseased condition and restore the normal healthful action. Chemical action applied to pharmacy, has revealed the active principles of various drugs unknown before, and assisted the pharmacist in preparing and classifying remedial agents, as to their value to the therapeutist. It, too, has enabled him to better combine a remedy at once efficient and acceptable to the patient.

In the long list of valuable helps to the practitioner in treatment of diseases, chemistry has contributed many worthy agents: anodynes, anæsthetics, antacids, antiseptics, antizy-

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motics, etc., etc.; among which are morphine, chloroform, ether, chloral, salicylic acid, *et id genus omne*, agents indispensable to the practitioner and a rich boon to the suffering patient.

The surgeon's knife and eccrasceur are shorn of their terrors in the presence of morphine and chloroform. The shock and the terrible pain in the severe ordeal of grave operations are transmitted to the shades of *oblivion* by the soothing and tranquilizing effect of these *agents*, on the *victim* of such misfortune.

The analysis of the elements of disease, by the aid of chemistry, has made it necessary to organize a class of remedies that might properly be called chemical agents, both, because of their organization, and of the effect on the disease. Sulphides, sulphites, bromides, iodides, carbonates, lactates, phosphates, etc., are appropriated and are valuable in the treatment of diseases of digestion, assimilation, elimination, *mal nutrition.* The chemical action, constantly exercised in the organism, is recognized by the physiologist, as an important factor, in the healthful operation of the organs and tissues, in digestion, assimilation, cell growth, excretion, etc., and the practitioner, too, estimates the value of chemical action in disease, and no less understands changes wrought by this agency, in the system, by external influence, as well as by causes existing within.

Familiarity with these laws of vital and chemical action, makes the study of pathology easier, and enables the practitioner, intelligibly to dictate the remedy to restore healthful process, when deranged. "Necessity is the mother of invention," may as truly be said of medical science as of mechanics, or agriculture, and when an intelligent and enlightened people, freed from the superstition of the dark ages, and untrammeled by the doctrines of infallibility, are permitted free and unbiased investigation, the way from cause to effect *must* yield its process to the understanding, and the laws of transmission be explained to the comprehension of man. With the power, opportunity and inclination, to investigate disease,

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the elements combining to produce a result, will, sooner or later, be comprehended, and the ready, willing, and competent pharmacist, from his store-house of crude material, familiar with the processes of his art, is ever prepared, with filter and percolater, to evolve a remedy, indicated by the physician, to control disease.

To the botanist, the profession is largely indebted, for his systematic classification of the vegetable kingdom. Materia medica has been greatly assisted by this classification, as to order, habits and properties of plants, as, by this arrangement, the pharmacist may obtain valuable hints as to the probable therapeutic value of a given species of plant, and, by grouping them, he can, with some certainty, say that peculiar properties and medicinal value attach to certain orders, thus saving time and labor, to accomplish which, by experiment alone, without this aid, would require a similar process for each variety.

Every plant in the materia medica has some medicinal value, specific or general, as a therapeutic agent. The remedial properties are due to some one or more active principles, the preservation and presentation of these, in an unaltered state, is the aim of the manipulator.

California and the Rocky Mountain slopes, on either side, furnish many valuable specimens of plants, and much interest has, within a few years, been given to these productions.

Among the list of new remedies offered by different explorers in the new field, are mentioned many of value, hitherto unknown, and unrecorded in the materia medica. In this essay, I shall take occasion to name a few of worth, that are *not* found recorded in the text-books on this subject. If the medical properties claimed for these new remedies are verified at the bedside, valuable additions will be made to the armamentarium medica.

Commensurate with this improvement in botany, chemistry, and correlative branches of materia medica, the preparation of drugs for the prescription stand, has in every particular, kept pace. Elixirs, extracts, effervescing salts, efferves-

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cing granules, gelatin coated and sugar coated pills, capsules for powders, and many desirable devices for taking medicines, have become so popular with the people, that unless the doctor is "*au fait*" in these improvements, he is considered an old fogy in his profession.

It *is* desirable to be thus educated to this standard of advancement, and make these improvements available, when the innovations do not lessen the efficiency of the remedy.

There are some objections, however, to "this way made easy," as much mischief may come of these easy going formulas, furnished by the pharmacist. The druggist finds it easy and *convenient* to prescribe without the advice of the physician, as the dose is indicated, and the use of the drug labeled on the bottle, but it is not always to the benefit of the patient. This has been brought about, as an evil accompanying the change in the method of preparing drugs for the prescription stand, and to advance the pecuniary interest of the pharmacist.

The pharmacist combines and indicates the use of drugs, and the polite and trained agent seeks the physician's office to have his preparations introduced and indorsed, and even has the assurance, in presenting his sample and his case, to say, "Physicians prescribing these preparations, will specify *ours*, on their prescriptions, as others of *inferior merit* and *quality* are often *substituted*."

The physician is not only asked to indorse the preparation, but must take especial pains to introduce it, the dose, time of taking and uses of the drug, accompanying imprinted directions, as an advertisement for the maker.

One pernicious effect of this system is, the doctor does not always arrange the remedy to suit individual cases; takes up too readily and easily with this proposed combination, as "it is, any how, very near the thing," and easy and convenient. Were these elements prepared in simple form, of uniform standard, or combined, even, when it can the better be done so, and let the *physician* make the proper arrangement, as indicated in individual cases, it would be better for the patient

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and practitioner, too. The latter would be compelled to keep his knowledge of these useful elements, and their combinations, up to the requisite standard, his *ability strengthened*, and his *patients* the *gainers*. Another objectionable feature of this system of drug business is, it floods the country with proprietary medicines, which every sane and reasonable man knows to exert a pernicious influence; it encourages the indiscriminate use of drugs by the people, who are too prone to dose for all manner of imaginary ills; it degrades the standard of the true druggist, and compels him to enter the *role* of a tradesman, buying in the market for the per cent. off, rather than the quality or intrinsic value of his stock—all of which is to the injury of the sick, and annoyance and trouble of the practitioner, who is called to correct the evil consequences.

The physician and patient are particularly interested in the quality of drugs, the price being a minor consideration. It is highly important to the *prescriber*, that the drug is *good*, of the required *standard*, and faithfully prepared to represent the property required. While this is true of the doctor, how much *more* important is it to the patient, that the drug be a genuine one. The *life* of the patient is in jeopardy, in all that the term implies. His time, his family, his obligation, his business, his worth in society, all suffer by his illness and inability to perform his duties, and his recovery depends on the value of the remedy administered for his relief. *He* relies on it to restore him his health; his physician depends on it in his mission, and nothing but chagrin and mortification awaits *him*, if his confidence has been misplaced. As a matter of business to the doctor, *important* interests are pending, as to the purity of the medicine, such as affect the success and reputation of the physician. Every medicinal agent used for the cure of disease, should be free from adulteration, as much of the physician's success in obtaining and retaining a practice, must depend upon the purity of the agents he employs. If they are spurious, the action and power are deficient; the practitioner must be disappointed, the patient and friends dissatisfied, and his reputation for integrity qnestioned, and his business suffer in consequence.

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The evil of adulterated or insufficient drugs, extends even beyond this. The man of moderate means, and the poor man, who are required by necessity, to husband all the resources at their command, can illy afford the loss of time, and risk the danger to life by reliance on *impure* drugs.

The laws of our country punish crime and fraud in other things, of less value than life, or good health. Counterfeiting money, infringement on the rights of property, social or political rights of others, are hedged about by legal devices, but *no* law has yet been passed adequate to suppress the adulteration and issue of impure drugs.

Police regulations are stringently enforced against the sale of unsound meat, impure bread-stuff, spoiled vegetables, etc., but no inspector of drugs, to protect the innocent purchaser of worthless and pernicious nostrums.

A counterfeiter of the currency would be most relentlessly and rigidly punished for making and issuing his spurious money; and yet, the man who stands convicted of making and passing spurious money, has not *committed* a crime that should be *mentioned* in relation to its *guilt* and moral *turpitude*, when contrasted with that of *making* and *vending impure medicines.* The former offender takes your money fraudulently, and may inconvenience you, and impoverish your exchequer; the latter not only takes your money, but like the *highwayman*, if *necessary* to accomplish his purpose, takes *both* your *money and your life!!*

Any system of deception aimed at this, the crowning blessings of life, good health, or by fraudulently leading you to rely on the efficiency of an impure drug to avert disease, merits the severest punishment. To the shame of our State, be it said, no legislation can be had to protect the people against quackery, or prohibit unqualified persons from practicing medicine. The people by their action, as represented in legislatures, do not even desire a practitioner of medicine to be *educated*, preferring *ignorance* to *knowledge* and *proper qualification*, and *superstition* to *science.*

The history of drugs is a complex one, and the complexity

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is recorded in the composition of our materia medica. Our nomenclature is a Babel of many dialects, and contains the *names* of drugs from almost every language the world has ever known. In our own language, often a dual name is given, neither of which is any indication of the drug or its use.

Among the new remedies offered to the profession, I have selected a few for mention, because of their attractive and remarkable features, and apparent positive value. There are, doubtless, many others of equal value, worthy of mention, that I have not the good fortune to know. These are spoken of because they seem to fill a place of usefulness in each variety, not well represented heretofore in our materia medica.

Should their clinical use, after thorough test, verify the value claimed for them by the discoverers, they will, undoubtedly, soon appear in our standard and authorized materia medica.

To the *Journal* of Davis & Leonard, of Detroit, Michigan, I am under obligations for the description and classification of some of the remedies mentioned.

Polycarpus Pennatefolices. Habit Brazil. Common name, Jaborandi, med. part. The leaves.

Dr. Fillip Caseri, of Rome, has an article entitled, "Physical Experiments and Clinical Notes on Polycarpus Pennatus," or so-called Jaborandi, in which he comes to the following conclusions:

1st. "That Jaborandi has an *elective* action on the salivary glands."

2d. "That it has a secondary action less copious upon the sudorifferous gland."

3d. "That it has a well marked diuretic action."

4th. "That it produces no effect whatever on the the circulation, nor on the generation of heat, nor on the respiration."

5th. "That the action is most efficacious when injected into the veins."

6th. "That its after effects are distinct debility, with an imperious thirst, directly proportioned to the action of the emunctories."

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This is valuable for its positive statement of clinical test, and furnishes, in a few words, by a competent critic, the action of the drug. It is highly recommended as an antidote for belladonna poisoning.

Xanthium Spinosum. Habit Europe. Local or common name, Spiny Burreed. Medical part,—plant. Dr. Grzyvolu, of Kirvoc Ozevo Podolio (for whose truthfullness Prof. Goubler vouches) declares this a specific for hydrophobia. An article on the subject may be found in the *British Medical Journal*, from the pen of the Doctor, in which he says, over one hundred cases, treated with xanthium spinosum, *all* of *which were successful*. This is a most wonderful result, and from the source of information, worthy of belief. In the *Journal of Therapeutics*, Paris, France, can be found a lengthy article, endorsing the Doctor, and making an extended report on its action.

Eriodyction Californiacum. Habit California, local or common name Gerba-Santee, Bears-weed; grows in the rocky barren soil of the Pacific slope. *An Evergreen*,—the plant has great reputation among the Spaniards and Indians, as a specific for consumption. They call it consumption weed. Dr. L. H. Bunlly, of California, reports remarkable cases of severe and longstanding bronchitis, cured by this remedy. All ascribe to it stimulant, diuretic and expectorant properties. Especially valuable in aphonia. Recommended in anæmia and piles.

Grindelia Robusta. Habit Pacific coast, of U. S. Local or common name, Grindelia. Green Plant. Employed with most benefit in those cases of difficult breathing, dependent upon valvular lesion. It has made some reputation as a remedy in asthma. It has been lately highly recommended as a specific in *iritis*, from whatever cause, whether used externally or internally.

Piper Methysticum Miq. Habit Polynesia. Local or common name, Gu-quana. Ava-Ava-Kava. Kova-Kova. Medical part, root. Medical properties, stimulant, tonic and expectorant, of great value among the Islanders, in the treatment

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of bronchitis, and justly said to be entitled to considerations as a remedy in tuberculosis. It is said to possess great value among the Pacific Islanders for blennorrhœa, and among the natives, relied upon as a specific in all gonorrheal inflammations.

Ustilago Maidis. Habit, U. S. Local or common name, Corn Smut, Corn Ergot. Medical part, fungus or chaff. Claimed by many phisicians, among whom, Dr. Henri Leonard, of Detroit, Michigan, to possess valuable oxytocic properties, similar to that of Ergot of Rye. Propylamine Alkaloid, one of the active principles of ergot, largely exists in Ustilago Maidis. It may be of great value, because of its abundance and easy accumulation.

Fucus. Vesiculosus. Habit the sea. Local or common name Sea Wrack, Bladler Wrack. This drug has been mentioned by Dr. Griffith, of Wyoming, Kent county, Delaware, as a remedy for obesity. He extols it highly as a remedy for this unfortunate and undesirable condition.

Turnena, Aphrodisiaca. Habit Mexico. Local or common name, Damiana. Medical part, the leaves and flowers. This drug has been heralded to the profession in too much of the "cure all and quackery style;" but in the *Medical Record* of New York, may be found an article from Dr. Alexander Murray, relating the treatment of a number of cases, in which decided beneficial results were obtained as an aphrodisive. Unlike phosphorus, it does not temporarily excite virility by calling out the reserve nerve force, but adds to the vitality sufficient vigoration to continue after the remedy is discontinued.

Cosmoline, one of the distillations from Petroleum. It has the important property of stability in character, never turning rancid. It is strongly antiseptic; valuable for burns, scalds, bites of insects, erythema, etc. From its conservative properties, it cannot be over-estimated as a dressing in that class of ulcerations where there is great discharge and sloughing.

Eucalyptus Globulus. Habit Australia. Local or common name, Blue Gem, Fever Tree. Medical part, leaves. A genus

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of Myrtacaca. The same order that gives us our cloves, coyeput, pimenti, etc. There are many varieties of Eucalyptus, but this is the only one said to possess medical properties of value. It has great reputation as a prophylactic in malarial districts. The Italian Government makes a valuable consideration for the cultivation of groves of Eucalyptus Globulus, and the United States might well imitate this example in malarial districts. It is said to possess value in the treatment of fevers as a remedy, similar to quinine; but the greatest value attached to this wonderful tree is, its effect on the atmosphere in the neighborhood of its growth, exhaling a vapor somewhat resembling camphor in odor, antagonizing the malarial element, and producing a healthful atmosphere. It is said to possess value as an external application in indolent ulcers, syphilitic sores, etc. Dr. Bucquoy, of Cochin Hospital, Paris, says nothing has produced better effect in pulmonary gangrene.

Salicylic Acid. Solid white crystals, slightly soluble in alcohol, glycerine and water. Best prepared for administration by dissolving in dilute boracic acid adding a small quantity of glycerine. Antipyretic, antiseptic, antacid, an antizymotic of great value in diphtheria, scarlet fever, typhoid fever, rheumatism, and indigestion, accompanied with acidity.

Salicylate of Soda. Highly recommended in rheumatism.

I cannot close these remarks on remedial agents, without testifying in the most positive and confident terms, to the virtue and value of an old and faithful aid to the practitioner of medicine, the "Vis Medicatrix Natura." It exists universally wherever the genus homo is an inhabitant. The "Vis Medicatrix Natura" is the most potent of all remedies yet known, and should head the list of remedial agents, in the vocabulary of every practitioner of the healing art. It operates through natural channels and may be said, "to be all things to all men;" *viz.*, tonic, stimulant, diuretic, alterative, anti-spasmodic, antiseptic and antacid. A strict attention paid to its administration, as to time and place, will insure prompt action and satisfactory results. Over-feeding, under-dressing, scanty-

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sleeping, excessive indulgence in the good things and pleasures of this life, are impediments to a full, free, and fair administration of this inestimable agent, and due regard *must* be had for the *hours*, both by patient and practitioner, that the remedy shall avail full therapeutic value.

Much has been said and written of our unsatisfactory system of weights and measures, and it is certainly desirable that a uniform system of weights and measures be had. There seems to be some discrepancy in the Avoirdupois and Troy tables, and although the latter is nearly always used by apothecaries, yet the elements of measure differ and confusion often arises in measurement, by the apothecary in his work. It has been suggested, and the suggestion meets with much favor, to adopt the metrical system of the French. This is a good system and uniform in its sliding scale, and will probably be adopted in the United States Pharmacopœia, in the next issue, as the simplest and most convenient of any in use. There are some serious objections to it, on account of its orthography.

The unit of weight is the *gramme*, but the prefix, *deci*, *deca*, *centi*, *centa*, differing only in the letters i, a, and e, are of great difference in value. To avoid this confusion among American physicians and pharmacists, why not use our decimal system, in enumerating the quantity, retaining the gramme as a unit. Thus, instead of decigramme, we would have .1 gramme; instead of decagramme, we have 10. grammes; instead of centigramme, we have .01 gramme, and instead of centagramme, we have 100 grammes. So in place of the confusing and unintelligible terms, *deca*, *deci*, *centi*, *centa*, we have 1. .1 .01 and 1. 10. 100., expressed in decimal form, less likely to be improperly pointed off, than spelling unintelligible words, and properly dotting i's and crossing t's.

The decimal system is more elastic, too, as one can express any part of a unit, as .2 .3 .4 .5 .25 .45, which equivalent would be difficult and verbose in the metric system.

The multiple of this expression in French, with the Arabic numeral prefix, is still more confusing—5 decagrammes, and 5 decigrammes differing only in the letters i and a, are of the

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comparative value of 50 and 5, respectively. The same, written in our language, expressed in decimal, would be 50 grammes and 5 grammes. The liability to confusion and serious mistakes, arising from the adoption of this system, endangering life, is a serious objection to the change.

If it is proposed by this system, to issue by weight, all drugs, liquid and solid, it will require more labor on the part of the physician to commit the table of combining equivalents than Agassiz or Hugh Miller ever accomplished in their vast works on natural history and geology.

Specific gravity, temperature, solidity, and degree of strength of every drug must be evenly adjusted in the make up of a prescription, that equity be kept.

"This would increase the complexity of therapeutic practice, without giving an adequate advantage, since the ingredients of compounds would be generally expressed in indeterminate or unmanageable fractions of the gramme."

It is well to consider, that if the system comprise the substitution of weight, for measure or volume, *necessity* compels *exact transition* of *equivalent* proportions, to *preserve* the order.

Supposing the patient provided with the metric spoon and metric glass, to carry the system thoroughly into practice, the order from the physician to the druggist, would be something of this form:

R	Strychnia sulph., - -	6 centigramme
	Quinia sulph., - - -	10 decigramme
	Tinct. Gent. comp., -	4 decagramme
	Simple syrup, - - -	1 centagramme

M. Sigda 1 metri spoonful.
50 deci-hora.

The doctor must paste the table of combining equivalents in his hat, as it will be impossible to register all this rubbish in his head.

The druggist and pharmacist will present a ludicrous picture, labeled with tables in French hieroglyphics,—a walking dictionary of chemical, arithmetic and algebraic phrases,

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bristling at every pore with technology, and philosophy of the *armamentarium materia medica.*"

In the language of the illustrious Evarts, *I object! !*

This metric system will be appropriate for tailors and machinists, when length and breadth are to be estimated, or for lawyers in charging for briefs; would be excellent for *grocers*, *green* grocers, to weigh by, but not for druggists or physicians where life is the issue.

Appreciating the difficult task of making a report on drugs and medicines, tolerant to most listeners, I have interspersed this effort with subjects of common interest to the physician, in close alliance to the drug element, in the work of the practitioner, hoping to relieve it of the tedium and monotony of a simple description of the history, habits, use, etc., of drugs.

The subject of legislation on the practice of medicine is one of vast importance to the community, and I would urge it as a matter of duty upon this body of physicians, as a Society, and upon each member, as an individual, to see to it that something be done at the next sitting of the legislature, to at *least require* those engaging in the practice of medicine to be *properly educated* and *qualified* for the *work.*

I have alluded, too, to some of the faults of the drug business of the day, that come within the power of the physician to correct, if acting in concert. The mission of the physician, in his higher and unselfish work, is the conservation of health, the protection he is expected to give humanity, by his knowledge of physiology and hygiene, a tribute philanthropy levies as a compensation for unusual privilege, as "No man when he hath lighted a candle putteth it in a secret place, neither under a bushel."

These conditions *attained*, our professional standard would be elevated, and humanity would be the gainer.

A motion to receive the report prevailed, and a motion to refer it to the Committee on Publication was made.

Dr. N. S. Davis.—Mr. Chairman, there are some things connected with the report which I deem of great importance, and have believed them of great importance for a good many years; and one of these points refers

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to the practice of prescribing and thereby countenancing the formation on the part of pharmacists of various compounds for the physician to use, and thereby filling all of our drug shops and physicians' offices, so far as they will admit them, with ready-made prescriptions. I deem this so great an evil, that I utterly refuse to use such medicines at any price. I have gone so far as to abuse every medicine agent that has come into my office to leave specimens of such drugs, and tell him plainly, that when I give up the most delicate duty of the profession, which consists in adjusting medicines accurately to each individual case, I would abandon the profession. I think one of the most important reforms that can be made in medical practice in this country, is in the business of the pharmacists. Physicians should adopt the fundamental rule to prescribe no manufacturer's medicine on earth, but to make his prescriptions; and the druggist should fill these with pure medicines, of recognized, standard strength. Whenever we want two items put together, all we ask of the pharmacist is to fill the prescription with the two items of the standard strength and quantity that we direct; and we should make directions for each individual patient. In this way, and in this way only, can we preserve purity of drugs, can we preserve reliance upon the quality of the medicines we use. Experience has shown through the generations that have passed, and will contiuue to demonstrate through the generations to come, (I speak now of ordinary, general rules) that as a rule, if a drug house formulates a compound of his own conception and gets it before the public, and it has a popular run the remedy will deteriorate in quality in less than five years; so that an individual who starts supposing that he has tested the medicines of a particular house, and begins to prescribe that house's medicines, does not know, after two years, what changes will be made in the firm, or what changes will be made in the strength of the medicines. He will find himself imposed upon in three-fourths of the cases. It has seemed to me that the clear and definite relations between the physician and the druggist were simply these: the druggist or pharmacist has simply to provide remedies of the standard strength, purity and quality demanded by the profession; and every druggist who dispenses medicines should be held responsible for dispensing the medicines according to that standard; and every physician should direct exactly the combinations he wants for his individual patient. This course would do away, as far as the profession is concerned, with the flood of proprietary medicines, and would eliminate them from the profession and throw them back upon the manufacturers, and upon a patronage outside the profession. But so long as the profession will patronize such medicines and compounds, so long will they keep them afloat and increase their popular use, and will increase the practice of druggists employing them, and will continue to encourage these proprietary medicines, the owners of which put them out at first pure and peaceable, if I may use the expression; but no sooner do they become popular than the purity becomes deteriorated, or the medicine worthless.

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One word in regard to the mode of improving our materia medica. We have had every year lists of new remedies. A remedy is proposed for something, but no sooner is it proposed by a responsible person, though for a definite pathological condition and purpose, than it is immediately seized upon and applied to uses that the original proposer never intended. It has a run of a little while, is applied to a great many things, and found to be not applicable, and consequently condemned and thrown aside. This is an evil, and should be corrected by more closely scanning when a new remedy is proposed—the exact pathological relations or conditions that the medicine is set forth as calculated to remove; and thus when we take it up to try it, make our experiments directly in regard to these relations so as to observe carefully its effects.

I have been chary about proposing new remedies, but I happened, a year ago or thereabouts, in a short communication to a medical periodical, to speak of the use or value of a certain remedy in a specific class of cases, for instance, in spasmodic asthma, dependent upon gastric irritation, or an irritation of the gastric branches of the pneumo-gastric nerve. It was published, and I have had at least a dozen letters from remote sections of the United States, asking where the remedy could be got and of whom. They mostly wanted to use it in ordinary catarrhal asthma, a variety of the disease to which I had not alluded at all. I presume many may have got it and used it to very little purpose. I speak of this as a prevalent tendency to seize upon new things, and because they do not fulfill every expectation, drop them. We should gain a great deal if we could get a committee on drugs and medicines that would make it a special business to institute experimental inquiries, and careful investigations into the nature of existing drugs, with special reference to pruning the materia medica. If not to prune it, to reduce our knowledge to a more exact appreciation of precisely what individual medicines are capable of doing; what influence they are capable of exerting upon the animal economy.

Dr. J. S. Jewell.—There is one remedy mentioned for hydrophobia, *xanthium*. I have read recently a report on that same subject in one of the St. Petersburg journals, in which the hopes excited by a certain physician are found to be baseless. It seems not to have succeeded at all, in the cases of those who have made experiments with it. So we are yet without a remedy for hydrophobia. There is one other subject, it seems to me, which ought to be attended to, and that is the therapeutics of rest. The subject has not yet been studied as it ought to be. I have some points in relations to the same, but will not occupy your attention with a statement of them this morning. Perhaps at the next meeting, I will do so. I call your attention to it, however, not because the subject is new, but because it is important,—the therapeutics of rest more especially in nervous diseases, and the therapeutics of position for various departments of medicine.

Dr. T. M. Hess.—I will say a word in regard to the use of a remedy not mentioned in the report. I refer to the inhalation of oxygen gas. It

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is well known that empirics or quacks are making use of it, claiming that it is a cure for certain diseases, and especially those of a tubercular nature. Having, as I thought, seen some benefit derived from the use of the gas by some empirics, I instituted some experiments a few years ago, in which, I believe, I demonstrated that it is really useful,—in some forms of debility, particularly when the debility results from a tubercular state of the lungs; and I am of the opinion that it should not be confined to this class of diseases. I argued that if the lungs did not receive a suf ficient amount of oxygen from the surrounding atmosphere, a certain amount added by artificial means might be useful. I have seen but little in the journals on this subject. In *Braithwaite's Retrospect* there are some experiments related, and that is about all I have seen on the subject. Unfortunately, after having tested oxygen upon half a dozen cases, four of which were decidedly benefited, I was taken sick, and my experiments were not continued.

Dr. Whitmire.—In regard to the use of chloral in certain cases, I wish to give two instances that occurred in one of my neighbor's practice. It was where chloral had been used by a family independently of the physician's prescription, in cases of sleeplessness or insomnia. The cases were more or less hysterical, and the chloral had been used a considerale length of time, and under its use the two ladies absolutely became insane, and one of them was sent to the asylum. There, the use of chloral was inhibited, and in a few weeks she recovered. After her return, she again became sleepless, and the family resorted to chloral again, and she became worse than when she was sent to the asylum. The physician happened in one evening, when they were dosing the chloral. It was the first he had known of their administering the medicine themselves. He asked him how long they had been using it, and they replied three or four months, and for the purpose of producing sleep. He strictly prohibited its use, and in the course of three or four weeks, both the ladies recovered.

The motion to refer the report to the Publishing Committee prevailed, and Dr. Ransom, another member of the same committee, read the following report on the drug,—*Apocynum Cannabinum:*

APOCYNUM CANNABINUM.

The object of this paper is to present you with some account of a medicinal agent which has fallen somewhat into obscurity, rarely entering into the armamentary of the physician of the present day. The article to which I refer is described in the U. S. Dispensatory, but most authorities make no mention of it in their works on Materia Medica, or Therapeutics.

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I claim for it no particular medicinal value other than is represented in the cases recorded, wherein it has obtained for us beneficial results; however, in my hands it has exhibited a peculiar therapeutical action which shall be noticed in another place.

The plant is popularly known as bitter root, hemp-dogbane, wandering milkweed and indian hemp, while apocynum cannabinum is its botanical appellation.

It is exceedingly unfortunate that three drugs: *cannabis indica*, *asclepias incarnata* and *apocynum cannabinum*—are known by the same name—indian hemp, for it gives rise to much confusion.

It is said, that the latter of these obtains this name from the fact that the oboriginees of this country used the fibrous portion of the stalk of the plant in making cords and ropes, for which purpose it was well adapted.

DESCRIPTION.

Bitter root is a perennial plant; stems and branches erect and of a reddish-brown color. It attains the height of from eighteen inches to three or four feet. The leaves are opposite; in form, oblong-ovate, somewhat downy beneath. The flowers appear in terminal paniculate cymes; corolla whitish, bell-formed, its tube not longer than that of the calyx.

Infloresence continues from June until August, when it is succeeded by a follicle or pod, measuring from four to six inches in length. The root is about three-fourths of an inch in diameter and grows horizontally some four or five feet; it is covered with a brown cortex, but within it has a yellowish appearance. The stalk and root abound in a milky acrid juice, which concretes to the consistance of caouchouc.

Bitter root is indiginous to nearly every portion of the United States, growing in shady spots near the roadside, or in the margins of woods.

The root, the officinial part of the plant, has a disagreeable odor and a bitter, nauseous and somewhat acrid taste. Dr. Knapp found it to contain "a bitter principle, extractive, tannin, gallic acid, resin, wax, caouchouc, fecula, lignin and a pe-

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culiar active principle which he proposed to call *apocynin.*"

MEDICAL PROPERTIES AND PREPARATIONS.

In small doses apocynum occasions considerable nausea, ordinarily; hence, it diminshes the frequency of the pulse; it also induces slight drowsiness or a sense of fulness in the head. We are led to believe that this is a property of the drug, dependent upon its influence over the nervous system. In four or five hours after a dose of five grains of the powdered root bark has been taken, the bowels are usually acted upon as by strong physic; in larger doses gives rise to severe emesis and purging —producing watery evacuations from the bowels.

According to certain observers, abundant diuresis is obtained from exhibition of large doses. Accompanying these symptoms is an increased sense of drowsiness and vertigo.

There is no officinal *tincture* of this agent mentioned in the United States Dispensatory; but a *fluid extract* may be found in the shops, of which twenty drops are sufficient to produce gentle catharsis, though frequently a half dram may be required for this purpose. An *infusion* is most frequently employed, prepared by boiling a half ounce of the dried root in a pint and a half of water to a pint. Of this one fluid ounce may be given two or three times a day. A *watery extract*, which is officinal may be used, the dose is two or three grains.

HISTORY.

So far as I have been able to ascertain, apocynum has a very limited recorded history. For many years it has been highly esteemed for its hydragogue properties. Dr. Rush has called it a "vegetable trocar." Later testimony as to its great usefulness in dropsical effusions is given us by Prof. Morrill, Dr. Valentine Mott, Prof. Lee, and others. In 1832 Dr. Griscom of N. Y., analyzed the plant, and stated as the result of his observations of its action in certain cases, "This agent has four different and distinct operations upon the system, which it invaribly produces: 1st. Nausea and vomiting, 2d. this is followed by increased alvine discharges, which are succeeded, 3d. by copious perspirations and in many instances, 4th. by diuresis."

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Dr. Wood quotes (U. S. Disp.) the testimony of Drs. Knapp, Parrish and Griscom as to its efficacy in dropsy; also, that of Dr. R. S. Cauthorn, Richmond, Va., who ascribes to this agent anti-periodic properties, as does also Dr. Peterfield Trent, of the same city; this gentleman having been disappointed in the treatment of intermittents with quinia, was induced by the recommendation of Dr. Cauthorn to try the apocynum; and he reports (*Southern Med. and Surgical Journal, Jan.* 1859.) six cases successfully treated with this remedy. He gave it in pills, in the dose of five or six grains every two hours.

Prof. Th. Husemann, of Gottingen, in *Archiv der Pharmacie, Rom.* 1876, thinks "it is quite probable that apocynum cannabinum contains a cardiac poison."

Mr. Edwin M. Hale, a professor in a Hahnemann school, speaks highly of the "anti-hydropic powers" of this medicine, and very unhomœopathically advocates the use of the *tincture* of the plant prepared in spiritus Eth. Nit., in lieu of alcohol, also "an infusion of an ounce of fresh root to a quart of water; this has been successfully administered, and seems to act more promptly in dropsy, in teaspooful doses, than any other prepparation." He subsequently cites a number of cases in which the above preparations were employed with the most satisfactory results. (Homœop. Mat. Med., New Remedies.) Mr. King states, in his dispensatory, that besides being a valuable hydragogue, a decoction of this plant is "exceedingly valuable in irritable uterus," and, "in diaphoretic doses it has proved beneficial in intermittent and remittent fevers and pulmonic affections."

Through the kindness of Dr. L. Clark, of Rockford, my attention was called to an article in the transactions of the N. Y. State Med. Society, 1869, concerning apocynum cannabinum in dropsical affections, by Harvey Jewett, M. D.

In regard to the action of the vegetable upon the kidneys, this writer states that in cases of dropsy, when they are not complicated with organic disease of these organs, "I have invariably found that it acted promptly upon the urinary secretion and produced a radical cure." He imagines that a low

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estimate has been placed upon the diuretic properties of this herb by certain physicians; but in cases wherein he has employed the plant, its diuretic action has been most decided, affording entire relief from effusions. As a *tonic* and diuretic, he regards it as "more efficient in the cure of general anasarca, and in removing the accumulations from serous sacs, than all other medicine known to the profession."

In a subsequent letter to Dr. Clark, (kindly furnished me by that gentleman) he says: "The stomach will tolerate but very small doses of apocynum without vomiting; and if it does produce vomiting and diarrhœa you lose the diuretic action."

I shall reconsider the influence of this medicine upon the secretion of urine more in detail, in a subsequent portion of this paper.

OBSERVATIONS.

My attention was called to bitter root, as a medicinal agent, some two years ago, since which time, I have employed it with very satisfactory results in dropsy. I find, however, that it possesses peculiar properties, exercising an influence for the relief of dropsical affections somewhat at variance with views entertained by certain of the authorities above quoted. I shall not attempt to theorize extensively upon this matter, but will simply present you with the facts, as observed in the following case, and in the subsequent experimentations.

Mrs. G., aged about 41, came under my care, Feb. 28th, 1877, suffering with an attack of phlegmonous erysipelas in both limbs, extending from the ankles to the knees, afterwards involving the thigh of the left side. The acute symptoms yielded under treatment, in a few days, but she was still on my hands, with an œdema of the left limb, which continued, nothwithstanding the use of various cathartics, diuretics and other eliminatives.

The bowels, however, remained obstinate, moving only once in three or four days; for every attempt to excite action in

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them only irritated the stomach excessively and without securing any good results. Potassium iodide had been employed without avail; but upon exhibiting thirty drop doses of apocynum, fluid extract, great relief was obtained within twelve hours, for the effusion had extended into the abdomen, giving rise to a most uncomfortable sense of oppression and distress, but this all disappeared under the influence of the medicine, and the use of it for a few days, produced a marked diminution in the size of the limb.

The remarkable feature of the case is that the drug seemed to promote the removal of the œdema *without affecting the bowels* in the slightest degree, or irritating the stomach materially; *neither were the kidndeys influenced* to *increased secretion of urine.* I was somewhat at a loss to account for these facts: 1. The positive subsidence of the dropsical effusion, wholly from the abdomen, and partially from the limb; 2, *without* sensible increase of any of the fluid excretions, in twelve hours after commencing the use of the medicine.

Was it due to the fact that the removal of the œdema was dependent upon some change in the *quality* rather than the *quantity* of the watery excretions? or, was there not wrought some alteration in the blood, permitting an absorption of the effused material without a reciprocal excretion of the same?

In order to ascertain, if posssble, some clue to these phenomena, I instituted the following experiments, noticing first, the influence exercised by this medicine upon the secretion of urine, more particularly in regard to its *quantity*, *specific gravity* and *acidity*.

In these experiments, I made use of the fluid extract of apocynum cannabinum (strength, one ounce of dried root in one fluid ounce of the extract,) furnished by Mr. E. H. Sargent, of this city, (Chicago) deeming this to be the most reliable and convenient form for use in experimentations. I have tabulated, below, the results of my operations, so that, at a glance, there may be seen the relative changes induced by the use of the agent, compared with the natural conditions of urine, care having been taken that the circumstances of health,

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diet, exercise, temperature, etc., be similar in both instances:

TABLE I. BEFORE USING APOCYNUM.					TABLE II. WHILE USING APOCYNUM.					
	Quantity of urine per day	Specific Gravity	*Degrees of Acidity.			Quantity of Urine.	Aver. Specific Gravity	*Degrees of Acidity.		Dose.
		Aver. daily obser.	each obs.	aver.				each obs.	aver.	
March 17..	22 oz.	1027.75	1 & 4	2.5	†April 18..	16 oz.	1026.5	2 & 2	2	15 drops.
" 18..	23.5 "	1029	4,2 & 3	2.66	" 24..	22 "	1026	2 & 2	2	16 "
" 22..	19.5 "	1029.75	4, 1, 2, 3 & 4	2 8	" 26..	18 "	1026	2 & 2	2.5	30 "
" 23..	17.5 "	1030.33	4,4 & 4	4	" 30..	17 "	1027	1,2 & 3	2	40 "
Totat ave.	20.6 oz.	1029.2+	2.99		April 24, 26, and 30..	18, 25, & 19.	1026.37+	2.1+		

*In the columns 4 and 5, I have arbitrarily made use of the numbers from 1 to 4 to designate degrees of acidity, as indicated in using litmus paper: 1 indicating decided 2 alkalinity, neutrality, 3 slight acidity, 4 decided acidity.

†On April 18th observations were made during only a portion of the day.

On investigating these tables, it will be noticed; 1st. That the quantity of urine was not increased while using the apocynum, but that the average daily amount excreted was somewhat diminished. Here we find ourselves considerably at variance with the views advanced by Dr. Jewett, in whose hands apocynum acts almost invariably as a diuretic.

2d. That the specific gravity, which usually ranged rather high in the normal condition, under the influence of the medicine, seemed to assume immediately a lower and more uniform degree; thus indicating a less quantity of solid matters in the urine excreted while using the drug than in ordinary circumstances.

3d. That the degree of acidity of the urine, though normally subject to great changes, being usually somewhat acid, was rendered more uniformly neutral through the agency of this medium.

We pass now to notice briefly the action of apocynum upon the stomach, bowels, and other organs.

In doses of fifteen to twenty drops of the fluid extract, there is created but little irritation of the stomach. In larger doses, a sense of nausea is experienced, which increases with the quantity taken, or the frequency of its exhibition, till emesis ensues when forty drops are given.

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During the experiments above noticed, the bowels were not affected by the medicine, until it was administered in doses of thirty or forty drops, when it occasioned a watery diarrhœa.

Whether taken in large or small doses, the drug gives origin to considerable drowsiness, analogous to that induced by lettuce, when partaken of freely.

I was unable to discover that this medicine had any influence whatever upon the perspiratory function.

Its effect upon the circulation was to reduce the frequency of the pulse, even when taken in small doses.

CONCLUSION.

I have thus given you a cursory, but uncolored account of my observations of the action of this medicine, and in view of my experiments in connection with the foregoing case, I think we may make this conclusion, bringing to your notice, perhaps, a new item in therapeutics; namely, that in the treatment of certain forms of dropsy, the effusion may be diminished without increase of the fluid excretions, through the influence of certain agents, which shall act upon the organism in a peculiar manner, at present unknown to us.

Medicines which increase the quantity of fluid excretions from the body (*ceteris parabus*) may thus diminish an œdematous effusion; but can we assert that this result is in all cases obtained alone through increased activity of the kidneys, or other emunctories? In other words, may there not be created in the system a demand for this effused material, thus inducing its absorption and re-assimilation, as an element of nutrition, perhaps?

It is well known that in cases where the supply of aliment is inadequate for a proper nutrition of the system, as in starving, a demand is created in the wasting of important tissues, for nourishment which is supplied by the absorption and appropriation of fatty deposits in the body.

May there not be a supposition that some medicines may have a property through which they shall give rise to an artificial demand of a similar nature, causing a serous infiltration to be removed?

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But this reasoning is purely hypothetical, and I have presumed to present these questions for your consideration, hoping that further observations will throw more light upon this interesting subject.

Some one has said: "Results are usually of easy observation, but prudence dictates moderation when we attempt to assign reasons for them." Consequently, we must wait for the accumulation of experience and the results of patient, careful observations to develop hypotheses into facts.

Theories are of no use to the practical physician, except as they may serve as the groundwork upon which ultimately to build facts that may be utilized.

It was not the primal object of this paper to present you with new theories or hypotheses touching therapeutics; nor is this the time or place for me to do so, (and, indeed, some may smile, perhaps, at the idea enunciated,) but it was designed more particularly to bring before you a remedy, in the treatment of dropsical affections truly of great value and efficacy, as evidenced in a series of cases recorded by Dr. Jewett, (*vide supra*) which I have not time to repeat, and in many other cases within my own knowledge.

One other thought: There are lying all about us, in the vegetable world, remedies, that, hitherto, have been disregarded by the profession generally, because employed only by "old ladies" or quacks, partly, because we have not become as familiar with their virtues as it is our privilege—our province. It is unfortunate, I repeat, that a fear of innovation should prevent the regular physician from analyzing and utilizing medicines, which, in the hands of irregular practitioners, have been successes, and have gained for them, perhaps, the merit of discovery, which should not have been the case. It has been thus, to a certain extent, with the remedy before us. Presented to the profession by the regular physicians, it has fallen into the hands of so-called, eclectics, by whom it is much used.

Shall we continue to overlook indigenous vegetables, that are plentiful and cheap, preferring in their place, imported and

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expensive remedies, while quacks, old women and irregular doctors make use of them to great advantage?

On the other hand, as "No pent up Utica contracts our powers," let us seek out and employ, for the good of our fellow beings, all that there is for us to use in this almost limitless realm of nature.

WILMOT L. RANSOM, M. D.

A motion was made to receive and refer the report to the publishing committee.

Dr. N. S. Davis.—I am aware, Mr. President, that the hour has come for the next order of business; and yet, I am hardly willing to allow the last paper to be disposed of without one or two remarks. The paper interested me much, because I have had occasion to use the medicine spoken of in the form of the fluid extract, for a number of years past. Speaking of any remedy in the treatment of dropsy; I suppose we all understand that dropsy is a mere symptom of some pathological condition, and may exist as a symptom of a good many pathological conditions. Hence, a remedy may be very successful in diminishing that symptom in one condition, and yet, not be applicable at all, in another. That the apocynum cannabinum spoken of, is a valuable remedy, I have not any doubt. I have prescribed it in the treatment of affections of which dropsy was a symptom, for a considerable time, and have found great diversity in the results of its action, probably dependent upon the actual pathological condition of the patient. I have used it with patients laboring under dropsy from Bright's disease; I have used it in dropsical conditions from cardiac disease; I have used it in cases of dropsy from what I suppose to be simple hyperæmic engorgement of the kidney, without structural lesion; and I am inclined to think in this latter condition will be found its chief value. Acting directly as a sedative to the circulation, it produces some modifying influence over the renal vessels, and probably upon the vaso-motor nervous system generally. That it will be an exceedingly valuable remedy in the treatment of all dropsical cases that depend on a hyperæmic condition of the renal vessels, without organic lesion, I have no doubt. When the dropsy depends upon organic lesion, it may be made temporarily palliative, but, according to my experience it is a difficult remedy to administer continuously through any long period of chronic affections without inducing, in a few days, an excessive irritation of the mucous membrane of the stomach and bowels. It will hardly have this effect, however, in one or two days, when administered in moderate doses. It can be used generally three, four, or five days successively without disturbance. But in carrying it beyond that, I find great caution necessary; there is a constant tendency to a degree of nausea that would require two or three days to recover from. But I must

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say that, in a considerable number of cases, where the patients were moderately feverish, and where dropsical effusions occurred, as the result of hyperæmia of the kidneys, it has acted favorably. It increased the quantity of the renal secretions in most cases, but certainly not in all. I have thought that when the medicine produces diaphoresis, especially in cardiac affections, there was no action upon the kidneys; but when it is sufficient to modify the circulation and hold it there two or three days steadily without excessive evacuation of the bowels, it pretty uniformly will produce an increase of the action of the kidneys. I think the paper of value and, as far as its experiments go, worthy of commendation.

Dr. E. W. Grey.—I appreciate the remarks made by the author of the paper, in reference to the physiological action of the drug mentioned. I think his work is in the right direction and should be encouraged. Certainly I like the clear statements of the paper; but I wish to call attention to what seems to me a source of some inaccuracy. I believe there was no account of the amount of urine; no account of the amount of water taken into the system; and there was no acconnt of the degree of watery saturation of the atmosphere, which would affect the result; there was no account of the condition of the discharges of the bowels. It seems to me these element- might have varied the conclusions. It is desirable that in conducting such experiments, every possible element that might have varied the conclusions should be guarded against.

Dr. H. A. Johnson.—I am prompted to say a few words in regard to the subject, by a fact from my own experience. In 1853, a patient in this city, a man then about 55 years of age, who had been a somewhat fast liver, was taken with what we supposed, Bright's Disease. He was under the care of my associate, at first, Dr. W. B. Herrick. Upon examination of the urine, I found it contained large quantities of albumen and microscopic tubular casts, with granular matter and a few epithelial cells. It was regarded as a case of Bright's Disease, without any probability of cure. He went on for two or three months under Dr. Herrick's care, and I saw him occasionally, and made an examination of the urine. At length somebody suggested that Indian hemp might do him good. He wanted to try it, as he was sleepless, and as I supposed at the time it was cannabis Indica that he referred to, I thought that possibly it might be well to try it. Dr. Herrick and I concluded to let him get some preparation of it, and it turned out to be an infusion of this apocynum cannabinum. Without knowing anything of its effects except what I gathered from reading a medical journal, we concluded to try it. The result was that he got right along from his first taking it, on the first of January until the latter part of April. There was a decided improvement in his condition, both as to the amount of albumen in the urine, and as to the character and quantity of the tubular casts, and as to the œdema or dropsical effusions in the serous cavities. At the end of that time he concluded to go to Buffalo, N. Y., where he met Dr. Ludlam, who said, at meeting him, "Well, Allen, I expected to see you about dead; I presume you will live long enough to get to New York. Dr. Lud-

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am continued the infusion, the patient drinking of it freely; and in the course of a year the old gentleman came back to Chicago with his dropsy all gone, and became a lean, gaunt, dried up old man. He used to play his game of cards as usual, and take his drink of whisky, and live as he always lived. He died about ten years afterwards from some affection of the central nervous system. The only medicine which had any effect upon him was this infusion; and its effect was not to increase the urine, but it stimulated the secretions from the alimentary canal, producing liquid, but not painful stools. I believed then, and still do, that that remedy had much to do with the cure of the case. I have been in the habit of using it rather in the form of an infusion than as a fluid extract. It is less likely to injure the alimentary canal if largely diluted. It did not modify specially the quantity of the urine.

Prof. Bartlett.—Dr. Jewell states that the root alone is efficacious. The fluid extracts are made from the root entirely. As to the power of the remedy, in one case 100 pounds of urine was evacuated in twenty-four hours. When you have cases of dropsy a gin tincture is best. Put half an ounce of bark of the root into a pint of gin, and give from half a teaspoonful to three or four teaspoonsful every three hours, using the remedy so as to avoid purgation.

The paper was referred to the Committee on Publication.

Drs. G. E. Willard, T. G. Bluthardt, of Chicago, and C. N. Cooper, proposed for membership, were referred to the Board of Censors.

The Board of Censors submitted the following report:

REPORT OF THE BOARD OF CENSORS.

In regard to the letter of Dr. Barnett withdrawing charges made against the Society of Macoupin county for medical improvement, we would respectfully report that it appears in evidence that Dr. Barnett associated himself in practice with an irregular physician. In consequence of such association the Society expelled Dr. Barnett, who preferred the charges now withdrawn. The Macoupin Society is thus placed in an unpleasant situation, for which there seems to be no remedy. The Board of Censors are of the opinion that expulsion from a local society should work expulsion from this Society.

The following applications have been presented to us, and we recommend their admission to membership in the Society. Dr. Ransom Dexter, Chicago; Dr. S. O. Richey, Chicago; Dr. W. Godfrey Dyas, Chicago; Dr. A. H. Foster, Chicago;

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Dr. C. H. Lovewell, Englewood; Dr. C. S. Taylor, Rockton; Dr. C. N. Cooper, Batavia; Dr. T. J. Bluthardt, Chicago.

There are other applications, upon which we are not prepared to report. E. INGALS, E. WENGER, J. L. WHITE.

The report was adopted.

A Member—We have adopted the report of the Board of Censors. That report recommends the expulsion of a member from the Society. Are we to understand that as a rule now?

Dr. N. S. Davis—The adoption of the report would not work such expulsion without further action. The report simply expresses an opinion that such should be the rule.

Dr. C. W. Earle, chairman, presented the report of the Committee on Diseases of Children, as follows:

SCARLATINA IN CHICAGO.

(PARTICULARLY THE EPIDEMIC OF 1876-7.)

BY CHARLES W. EARLE, M. D.

Scarlatina is by no means a new disease in the city, but its unusual prevalence during the past seven months,—and the consignment of more than 800 persons, mainly children,—to early graves, has brought with peculiar impress the subject to our minds.

To place on record what may be of use to the profession in regard to this epidemic, and to make inquiry in regard to certain questions not yet fully decided, are my reasons for choosing this subject at this time.

It is a well known fact that Scarlatina, more perhaps than any other disease, is characterized by great diversity in regard to its intensity, complications and sequelæ. There are questions, too, as to the season of the year in which this disease prevails with greatest frequency; the age at which children are most susceptible; the influence of sewerage, poverty and wealth, on the mortality; and the worth or worthlessness of certain drugs as preventives of the disease.

In a circular sent to every physician in the city, about April 1st, 1877, I requested information in regard to many of these mooted questions, hoping by the collection of a large number of cases, to add some testimony which would prove useful in future epidemics. Eight hundred circulars were sent,—less than one hundred were returned with answers. My statistics, therefore,

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will not be as full as I had hoped, yet enough, it seems to me, have been collected to form a fair basis for calculation. To the gentlemen who favored me with a reply, I return my profound thanks. It was no light task to go back over one's list and collect the data requested, and I am certainly under obligations to those who took the trouble to do it. I am not without hopes that the facts and figures deduced will be of some slight service to the profession; if so, I shall be more than compensated for the time which necessarily has been consumed in the preparation of the paper.

The Early Mortality from Scarlet Fever in Chicago.

It may be said that Scarlatina has been endemic with us since 1851. Previous to that year no mortality tables were prepared; and we have no means of knowing to what extent the disease prevailed.

Table Showing the Number of Deaths from Scarlatina from 1851 to 1876.

	January	February	March	April	May	June	July	August	September	October	November	December	Total	Population.	Taken by
1851						4	4	2		1	3	3	17	35,000	Estimated
1852	2		4	7	5	2	1	2	4	3	5	11	46	45.000	Estimated
1853	6	9	11	2	1			3	2		1	1	36	59,000	City.
1854	2	1	2		1	4	1	1	4		1	7	24	65,000	Estimated
1855	1	3	1										5	80,000	State.
1856		4		1	1			1		1	3	4	15	84,000	City.
1857	2	19	9	11	7	7	5		2	5	3	5	75	90,000	Estimated
1858	4	4	21	22	34	16	23	23	11	7	30	38	233	97,000	Estimated
1859	29	40	45	24	10	15	14	6	16	31	8	15	253	104,000	Estimated
1860	22	11	19	15	19	5	7	8	7	5	3	4	125	109,000	U. S.
1861	1	3				1	3	2	3	2	6	24	45	120,000	Estimated
1862	6	13	17	11	16	22	43	16	35	45	48	63	335	138,000	City.
1863	107	60	54	50	25	15	28	10	26	12	0	9	405	150,000	Estimated
1864	7	8	5	8	5	7	4	4	1	3	5	13	70	169,353	City.
1865	8	8	10	6	8	3	6	11	12	7	2	8	89	178,492	State.
1866	6	12	12	6	7	14	14	17	12	8	6	13	127	200,418	City.
1867	21	14	10	9	7	8	1	8	3	3	3	14	101	225,000	Estimated
1868	7	5	7	3	13	8	12	17	10	27	45	38	182	252,054	City.
1869	47	43	28	47	28	51	71	56	30	48	66	60	573	275,000	Estimated
1870	63	43	52	37	32	39	21	21	8	13	11	11	351	306,605	U. S.
1871	14	9	9	7	11	7	9			16	17	25	124	325,000	Estimated
1872	21	15	11	14	15	6	9	8	4	8	10	22	142	367,394	City.
1873	14	7	14	13	11	11	15	8	10	4	4	4	115	375,000	Estimated
1874	7	2	4	5	6	14	12	11	16	6	12	10	105	395,408	City.
1875	14	7	12	17	21	15	11	11	20	17	17	44	206	400,000	Estimated

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In all the health reports, Scarlatina is not spoken of in particular, until 1858, when it is observed that it prevailed throughout the entire year. Two hundred and thirty-three deaths were reported, which probably only partially represents the mortality, as Dr. N. S. Davis, in a report made to the Chicago Medical Society, says, "unfortunately the ordinance of the city intended to compel the procurement of a certificate setting forth the cause, or causes of death in all instances before burial, has been so imperfectly executed as to be of no real value."* The population of the city at that time was about 97,000, consequently 1 death from Scarlet Fever to every 416 inhabitants was recorded,—however imperfect the registration may have been.

The following year, 1859, the epidemic continued with the same severity,—the recorded deaths amounting to 253,—1 to every 411 inhabitants, the population being 104,000. During the two years following, 1860 and 1861, the deaths from Scarlatina notably diminished, but in 1862 mounted up to 335, with a population of 138,000,—one death from Scarlatina to every 412 persons. In 1863 the mortality list was 405,—1 death to every 370 persons. From this time to 1869 the ravages resulting from this disease were light, although deaths were reported without exception, every month. During that year the mortality was heavy.

MORTALITY BY MONTHS FROM SCARLATINA DURING 1869.

January	February	March	April	May	June	July	August	September	October	November	December
47	43	28	47	28	51	71	56	30	48	66	60

Total deaths from Scarlatina, 573.
Population, 275,000.
One death from Scarlatina to every 497 inhabitants.

The mortality diminished the next year, and was really light during the following five years, but commenced to increase in December of 1875, when it reached 44.

*Quoted from the "Sanitary History of Chicago," edited by John H. Rauch, M. D., President Illinois State Board of Health and Sanitary Superintendent of Chicago, from 1867 to 1873. I desire to acknowledge the great value this work has been to me in preparing my report, and to publicly thank the author for valuable advice and suggestions.

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MORTALITY BY MONTHS AND WARDS FROM SCARLATINA DURING 1876.

WARDS.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total.
January		3	1		1	3	7	3	3	2	2	5	1		3	4	2		1	2	43
February			2			7	5	1			2	4	3	2	5	6	4	1			42
March			3	2	2	4	5	4	1			4	2	2	6	4		2			24

NUMBER OF WARDS CHANGED TO 18.

WARDS.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total.
April	1	4			7	5	1	2		1	1		5	5	4	1	1		39
May		1			4	1		1	5	2			4	3	1	2			24
June			1	1	2	4	3	1	2		1	1	4	6	4	1	1		32
July			2		2	6	2	2	1	2	2		1	12	10		1		44
August			1	3	8	11	6	4	1	3	4	1	5	9	4	3	1	4	69
September				5	8	5	5	2		6	3		6	13	4	2	4		63
October			1	4	8	11	10	11	3	1	1		18	25	2	8	18	2	124
November			1	5	18	7	7	9	5	8	7	9	18	22	4	5	9		137
December			1	3	12	5	7	3	3	4	5	8	6	33	13	5	13	5	129

Total deaths from Scarlatina, 770.
Population, 407,661.
One death from Scarlatina to every 529 inhabitants.

During the first nine months of 1876 the mortality, as may be seen by the above table, was not particularly heavy,—indeed, taking the death rate from Scarlatina for the entire year, it cannot be regarded as very severe.

TABLE SHOWING NUMBER OF DEATHS FROM SCARLATINA IN PROPORTION TO POPULATION.

YEAR.	Population.	Deaths from Scarlatina.	Proportion.
1858	97,900	233	1 to 416
1859	104,000	253	1 to 411
1862	138,000	335	1 to 412
1863	150,000	405	1 to 370
1869	275,000	573	1 to 497
1876	407,661	770	1 to 529

THE EPIDEMIC OF 1876–'7.

It is only by taking the mortality during the last three months of 1876, with that of the first four months of 1877, that we can appreciate the magnitude of what we have been told is one of the most malignant epidemics on record.

We do not believe, at the outset, that the epidemic has been so terribly severe as some would make it appear, nor that the medical profession has been at all negligent of its sacred duty, as the guardian of public health, unless it was, in not making known in more emphatic terms, the extreme contagiousness of

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the disease. With absolute indifference in regard to properly disinfecting dwellings where Scarlatina had occurred, and with no attempt to isolate those affected from those who were liable to infection, and furthermore with the public press filled with statements that certain medication would give partial, if not total, immunity from the dreaded disease, we only wonder that our scourge has not been more extended, and numbered its victims not by hundreds, but by thousands.

MORTALITY BY MONTHS AND WARDS FROM SCARLATINA FROM OCTOBERR, 1876, TO MAY, 1877.

WARDS.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
October			1	4	8	11	10	11	3	1	1		18	25	2	8	18	2	123
November		3	1	4	18	7	7	9	5	8	7	9	18	22	4	5	9		137
December		3	1	5	12	5	7	3	3	4	5	8	6	33	13	5	13	5	129
January	3	4	2	3	19	9	8	11	6	3	3	18	5	22	10	11	9	5	153
February	1	5	1	5	13	16	11	6	3	9	5	3	9	12	6	2	5	1	113
March		6	4	5	9	9	16	11	2	1	2	4	4	8	2	3	5	4	92
April	1	1	2	2	3	16	6	4	3		1	4	3	9	8	7	3	2	74
Total by Wards	5	22	12	25	82	73	65	55	25	26	24	46	63	131	45	41	62	19	821

Total deaths from Scarlatina, 821.
Population, 407,611.
One death from Scarlatina to every 496 inhabitants.

If we now attempt to form an estimate of the severity of this epidemic, we should have the entire number of cases of Scarlatina which have occurred. The system of registration of deaths with us is so complete that the number of fatal cases is accurately known. The entire number of cases which have occurred, and the entire number of deaths which have taken place being given, the death rate is easily computed. If a report based on returns made by 71 physicians representing every different school, grade, nationality and sex, is a fair basis for an estimate, then the figures I am about to give as the total number of cases which have occurred during the last 16 months, are as nearly correct as possible. It may be urged that a person making a report of his practice in a certain direction would desire that it should be large; that he should make a good showing. I have absolute confidence in the reports received, and would state further that of the 71 physicians who sent me a report, 10 have had none at all. I grant that at least 75 physicians, those especially who are engaged in specialties, and those having a practice largely in our hotels, have not seen Scarlatina at all

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during this epidemic. Seventy-one represents one-tenth of the practicing physicians of all classes in this city. Seventy-one physicians have had 1,417 cases of Scarlatina since Jan. 1, 1876, giving as a total 14,170 cases of this disease since that time. This does not include a certain number, I think, at least, 500 cases, which have been so mild that they have recovered without a physician being called. Nor does it include those treated by midwives, who are also known to have had a considerable number. We have then a total of 14,170 cases, with 1,191 deaths, or a mortality of 8½ per cent. A mortality below 10 per cent. is usually regarded as a benign epidemic,—and in this list the epidemic of Chicago, in 1876–'7, must be placed.

Such mild epidemics have been reported by Kostlin, of Stuttgart, in 1856, where the loss was 7.3 per cent. by van Holsbeek, of Brussels, in 1856, when the loss was 8 per cent. and by Cremen, who suffered a loss of 9.2.

Among epidemics described as malignant may be mentioned that in Stein, in 1856–'7, where 20 per cent. died,—in Stuttgart, in 1862, the mortality was 23.3, and among the highest mentioned by Thomas is the epidemic in Namur, where the loss was 30 per cent.; in Esslinger, between 1853–'7, the loss was 36 per cent., and in one other about 40 per cent.

I have been surprised that the officers of the health department have estimated so small a number of Scarlatina cases, with of course a high per centage of deaths. If we suppose that my estimate is too high by 2,000, for instance, we cannot make it a malignant epidemic; even then our per cent. of deaths would be only 9¾ per cent. or, deduct 4,000, making the total cases at 10,000, our per cent of deaths then would be less than 12, which is not by any means an unheard of epidemic. The fact is, ladies and gentlemen, we had abundant material for a terrible epidemic, and with the causes in operation for the spread of the disease mentioned hitherto, and others to be presently demonstrated, it is marvelous almost, that ours has not been a malignant one. Below I present a table showing the number of children under 16 years of age in every ward in the city:

Ward.	1	2	3	4	5	6
Of all ages.....	14,180	16,324	15,123	21,568	37,543	31,258
Under 16 years.....	1,106	4,592	4,240	7,311	17,146	13,993

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WARD.	7	8	9	10	11	12
Of all ages.....	31,398	31,216	14,264	12,696	17,717	19,839
Under 16 years	14,169	12,301	3,528	4,309	4,976	6,236

WARD.	13	14	15	16	17	19
Of all ages.....	16,350	47,812	24,076	20,520	19,109	16,643
Under 16 years.....	6,422	20,889	10,559	8,617	7,662	4,684

Total population, 407,661. Population under 16 years of age, 152,751.

From a recapitulation it will de seen that we have 152,751 persons answering to that description, as regard age; 43,000 of these are enrolled on the public school list, and 27,637 on the rolls of private schools. If we turn now to the table showing the mortality by wards from Scarlatina during 1876, we find that during the months of July, August and September, deaths occurred in every ward except the 1st and 2d. In the three months named 176 fatal cases were recorded, and it is safe to say that at least 150 residences had been infected. No well-directed efforts had been put forth to disinfect these houses; the occupants did not know that the contagion could be carried in clothes, books, lunch-papers, etc., etc., and in many instances the family physician did not communicate the fact to them, and in a few cases laughed at the idea that increased personal intercourse is one, if not the most important factor in the spread of this disease. Forth, then, from at least 150 infected points about Sept. 1st, marched these little people to take their seats in public or private schools, and to come in contact with more than 63,000 other persons who occupied the same school buildings, and in some instances contiguous seats. When we consider that it is extremely doubtful whether Scarlatina is ever spread without either direct or indirect personal intercourse, we are prepared, with the preceding facts before us, to expect an increase in the mortality in the months following the opening of the schools in our city. There was an increase, for from a mortality of 63 in September we had 124 in October, and 137 in November,—the epidemic reaching its height in January, when the number of deaths was 153.

Notwithstanding the lack of information that prevailed among the people in regard to the spread of Scarlatina epidemics, and the apathy with which physicians communicated the known facts in relation to it to the public, only one death from the disease to every 128 persons under 16 years of age has taken place in the last sixteen months in our city.

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Coming, now, to consider the wards separately, we find the following facts:

THE WARDS CONSIDERED SEPARATELY.

Boundaries.	Acres.	Sewerage in Miles.	Feet of Sewerage to Acre.	Population.	Population under 16 years.	Condition of Buildings, Occupants, etc.	Deaths from Scarlet Fever.	Proportion to Children.
First Ward, South Division, north of Harrison street.	476	16½	186	14,180	1,106	Business houses, hotels, few residences.	6	1 to 184
Second Ward, South Division, between Harrison and Sixteenth streets.	394	10.4	140	16,354	4,592	Smaller business houses; first-class residences near the lake; poor near river.	30	1 to 150
Third Ward, South Division, Sixteenth, Clark, 26th streets, and the Lake	438	11⅔	141.4	15,123	4,240	Mainly fine residences, except west of State street.	22	1 to 190
Fourth Ward, South Division, the Lake, Twenty-sixth and Clark St., everything south.	1,070	17⅔	87½	21,568	7,311	Among the finest residences in the city; wealthy occupants.	36	1 to 203
Fifth Ward, South Division, west of Clark and south of Sixteenth streets, river, everything south.	2,879	17	31	37,543	17,146	Houses small and occupants poor: contains 8 slaughtering houses, 3 packing houses, 4 gut-cleaning and 2 blood drying establishments, 1 fertilizing establishment, and 1 glue factory. In close proximity to Union Stock Yards, with 22 packing and rendering houses, 2 slaughtering houses, 9 fertilizing establishments, 2 gut-cleaning houses. Bridgeport.	116	1 to 147
Sixth Ward, West Division, everything south of Sixteenth street.	4,242	14½	133.	31,258	13,993	Many small wooden buildings; surface water; majority of people poor.	119	1 to 151

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THE WARDS CONSIDERED SEPARATELY.

Boundaries.	Acres.	Sewerage in Miles.	Feet of Sewerage to Acre.	Population.	Population under 16 years.	Condition of Buildings, Occupants, etc.	Deaths from Scarlatina.	Proportion to Children.
Seventh Ward, West Division, everything between Sixteenth and Twelfth street.	1,523	19	67	31,393	14,169	Condition of houses and occupants about the same as in Sixth Ward; grade higher toward the west, and more paved streets.	99	1 to 143
Eighth Ward, West Division, Twelfth, Loomis, Van Buren, and River.	644	18	148	31,216	12,301	Large number of houses very poor; one side of ward bounded by river; streets narrow and densely populated; better condition toward western boundary.	75	1 to 64
Ninth Ward, West Division Van Buren, Curtis, Randolph streets, and River.	289	15	209	14,264	3,528	Larger business houses; streets raised to grade; occupants of dwellings of better class; population less crowded.	38	1 to 93
Tenth Ward, West Division, Randolph, Curtis, Ohio streets, River.	259	12·2·5	252	12,696	4,300	Houses and occupants about same as in Ninth Ward; the poorer part of this ward along its northern boundary corresponding very well with some of the crowded and narrow streets of the Ninth.	42	1 to 102½
Eleventh Ward, West Division, Twelfth street, Ashland avenue, Ohio, Curtis, Aberdeen, Van Buren, Loomis streets.	573	17	156	17,717	4,976	Main part of ward occupied by fine houses and wealthy people; a small portion in north part occupied with small houses, with the poorer class.	39	1 to 127

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THE WARDS CONSIDERED SEPARATELY.

Boundaries.	Acres.	Sewerage in Miles.	Feet of Sewerage to Acre.	Population.	Population under 16 years.	Condition of Building and Occupants, etc.	Deaths from Scarlatina.	Proportion to Children.
Twelfth Ward, West Division, Twelfth St., Ashland avenue, Lake street, west to limits.	2,401	16	36	19,839	6,236	In every respect one of the finest wards in the city, both as to character of buildings and occupants,	61	1 to 102
Thirteenth Ward, West Division, Lake street, Ashland and Chicago ave's, west to limits.	1,439	11	40	16,350	6,442	Good in east half; very poor in remainder.	95	1 to 67⅔
Fourteenth Ward, West Division, all that part of this division north of Ohio streets and Chicago Ave.	3,276	18¼	30	47,812	20,889	Small buildings; low ground; people poor and thickly settled; northeast boundary is the north branch of river.	183	1 to 114
Fifteenth Ward, North Division, north of North avenue.	1,109	13	63	24,076	10,550	Good.	76	1 to 139
Sixteenth Ward, North Division, between North avenue and Division St.	534	13	130	20,520	8,617	Good.	64	1 to 134
Seventeenth Ward, North Division, the space bounded by Franklin Division and Franklin streets, and the River.	383	11¼	164	19,109	7,662	Poor. In close proximity to river.	132	1 to 58
Eighteenth Ward, North Division, Franklin, River and Lake.	561	19¼	183	16,643	4,684	Elegant buildings, and recently occupied.	20	1 to 161

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Sewerage.

If we take the four wards in which the deaths have been less than 1 to every 100 children under 16 years of age, we find them to be the 8th, 9th, 13th, and 17th. In what condition do we find these wards as regards sewerage; what the condition of the people, and their facilities for opposing any infectious or contagious diseases? The Board of Public Works, in its report for 1876, says, "in ten wards our system of sewerage is almost complete. These wards are the 1st, 2d and 3d, in the South Division, 8th, 9th, 10th and 11th in the West Division; and the 16th, 17th and 18th, in the North Division." In three wards, then, where the sewerage is "almost complete," our mortality is the highest. If we take the 5th ward, and the adjacent Stock Yards, with its fifty-four houses devoted to slaughtering cattle and hogs; with its two hundred and forty-five rendering tanks, and with the entire drainage from all these establishments, emptying into the north fork of the south branch at the city limits, and with only 63 feet of sewerage to the acre, we find here only 1 death to 147 children, while in the 10th ward with the greatest number of feet of sewerage to the acre in any ward, we have 1 death to 102 children. In a word, it appears to me that sewerage has nothing to do with the spread of the disease, and but little with the mortality.

The Relation of a Large Population Under 16 Years of Age in Regard to the Spread of the Disease.

Our attention has frequently been called to the alarming mortality in certain wards. We are told that 183 deaths from Scarlatina have taken place in the 14th, and 116 in the 5th, and 99 in the 7th. Forthwith the garbage wagons and the men with shovels aud brooms are ordered to pass in review before the Health Department, and move *en masse* to these wards. To clean the alleys and sweep the streets is a most commendable undertaking. It should be repeated frequently, but it does'nt stop the ravages of Scarlatina. We forget that in these wards the largest number of children live. The 14th has nearly 21,000; the 5th over 17,000; and the 7th more than 14,000. These three wards contain more children than we find in the 1st, 2d, 3d, 4th, 9th, 10th, 11th, 12th, 13th, 16th, 17th and 18th wards. Excluding sewerage, nationality, sex and social relations we

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must come to the conclusion that where we have a large number of children living in small houses, densely crowded, with no means for isolation, the disease prevails to a great extent; where we have a great number of infected points, we have a large number of Scarlatina cases. When, from any cause, children who are susceptible, come in contact with infected points, we have an increase. To-day (May 16th,), we have an illustration of this fact, and the fulfilment of an opinion I expressed to certain of my colleagues three weeks ago. Thirty-four new cases are reported during Monday and Tuesday of this week,—a great increase,—simply because families have changed residences, and on the 1st of May many infected houses were occupied by children who had hitherto escaped Scarlatina.

We have been inclined, perhaps, to censure the Board of Health in what seemed extreme measures for the control of contagious diseases. This is wrong, they should have our support, and if we are ever to have this scourge swept from our midst, the infected houses must be absolutely under the control of some one who will isolate the people and disinfect the premises. It is perhaps problematical whether the Scarlet Fever placards are just the thing,—there are well-grounded objections to them in some cases,—but there is no doubt about the propriety of the Board of Health's having absolute jurisdiction over infected persons and dwellings.

Rather than occupy a house where Scarlatina had prevailed, with persons still susceptible to the disease, I would pitch a tent on the prairie, and there abide for two years, if necessary. The great question is, how shall we *isolate* our Scarlatina patients, and what shall be done with the infected houses?

THE SUBSIDENCE.

The epidemic is subsiding, but has not by any means entirely disappeared.

As contributing largely to the diminution in the number of new cases, and as a proper commencement of measures, which, if energetically carried out and persisted in, will render the disease almost *nil* in our midst ; I regard the following circular from the newly elected health commissioner as very apropos:

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HEALTH DEPARTMENT, CITY OF CHICAGO,
January 31st, 1877.

TO THE PHYSICIANS OF CHICAGO:

Your attention is called to the 9th Section of the Act of the Legislature of the State of Illinois, approved Feb. 16th, 1865; also to Section 31 of Act of 1863, found on page 545 of Revised Ordinances of City of Chicago, as follows:

"Every practicing physician in the city who shall have a "patient laboring under any malignant or yellow fever, small-"pox or other infectious or pestilential disease, shall forthwith "make report thereof, in writing, to the Secretary of the Board of Health, describing the street, number and location of the "place where the said patient may be located, so that it may be "easily found; and for neglecting so to do shall be liable to a "fine of fifty dollars."

In attempting to confine and control the epidemic of Scarlet Fever, now raging, I ask the active co-operation of all physicians in the city. Every physician neglecting his duty in the all-important measure referred to in the above legislative Act, upon proof thereof, will be immediately prosecuted as the law directs.

Where persons have died with Scarlet Fever, Diptheria, or other contagious disease, this department earnestly discourages public funerals.

OSCAR C. DEWOLF, *Commissioner of Health.*

As a part of the plan to prevent the spread of the disease, the health department quarantined many of the infected houses and prevented children who had had Scarlatina from attending school, until a proper certificate was issued by the attending physician.

Another reason why the epidemic is subsiding, is that a large number of children who were susceptible to take the disease have had it, thus diminishing the number of those who at this time could be influenced by the contagious element. Above all the reasons, however, which I have enumerated as conspiring to cause a subsidence of this epidemic, this one stands pre-eminent, that the people who own and control the children are learning what the medical profession should have told them in October 1876, that if their children are kept from where the contagious element of Scarlatina exists, and persons who come

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from infected places are kept from their children, exemption is certain.

INFLUENCES EFFECTING THE MORTALITY.

The Seasons.

The greater prevalence of the disease in the fall of the year, has been recognized since Sydenham's time. (Ziemssen.) In England, the greatest mortality is between the middle of September, and the middle of November. Our epidemic spread rapidly during the fall months, but did not reach its greatest mortality until January. In this respect it differed somewhat from other epidemics, a departure from the general rule, which I believe was due to the total absence of any well directed efforts to control it.

Age.

Scarlatina is a disease of infancy and childhood, although no age is absolutely exempt.

Age of 1243 fatal cases of scarlatina in 1876—7.

Under	1 year,	64
From	1 to 2,	178
"	2 to 3,	234
"	3 to 4,	213
"	4 to 5,	148
"	5 to 10,	301
"	10 to 20,	73
"	20 to 30,	18
"	30 to 40,	7
"	40 to 50,	1
"	50 to 60,	2
"	70 to 80,	3

Wealth and Poverty.

I have data respecting the social position of 1079 cases of scarlatina. Of those who could command every attention, only 5½ per cent. died, while the mortality was 20 per cent. among the poor. These figures differ greatly from facts observed in my own practice. I attended five children sick in one small room, destitute of bed clothing and ordinary nutrition, with recovery in every case. On the other hand I have seen the child of wealthy parents, surrounded by every comfort and delicacy,

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attended by a corps of our best consulting physicians, die without the amelioration of a single sympton. With the munificent arrangements for the care of the sick poor in this city, I believe the fatality among this class is not greater than among their wealthy neighbors. The mortality of cases treated by the out Staff of the Central Dispensary during this epidemic, is less than 10 per cent., a showing which can hardly be excelled by an equal number of physicians attendant upon the sick in our stone fronts. In the possession of facilities to *isolate* their children, the wealthy have a great advantage, which if properly used, should give almost immunity from the disease.

Complications.

I remarked at the commencement of my report, that scarlatina was characterized by great diversity in regard to complication, etc., etc. While some epidemics are peculiar in presenting but few complications, this one seems to be remarkable for the great number, and their varied character. In 1417 cases there were 587 complications, classified as follows:

Glandular affections,	314
Dropsies,	102
Ear affections,	105
Convulsions,	69

The comatose condition has supervened in quite a number of cases, death following as the rule. A very few cases, however, recover.

The Temperature.

The fever heat as indicated by the thermometer is most valuable as an aid in our prognosis; the length of my report however, will preclude any extended remarks on this important subject. In the mild form of the disease the temperature usually rises slowly to about 102° and gradually subsides. In severe attacks, the child coming down suddenly, the temperature will sometimes rise rapidly to 104° or 105°. A convulsion or some other complication will probably take place if this temperature is maintained for any length of time. If, however, it commences to abate within a few hours, a favorable result may be expected. A persistent temperature at 104° to 105°, I always regard dangerous, although a few cases have recovered even when associated with

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continued delirium. A temperature of 105° and above, unless at the outset of the disease and then unassociated with coma, should be regarded as very critical, death taking place almost without exception.

Great as may be our faith in isolation, *complete*, *rigid* and *continuous* for the prevention of this disease, no report of this epidemic would be complete without a consideration of

PROPHALAXIS.

Nearly seventy-five years ago it was announced that a natural specific for the cure and prevention of Scarlatina had been discovered. From the fact that at first it was vended as a secret remedy,—and, secondly, its claims pressed by one in whom the medical profession had no confidence whatever,—practitioners refrained from testing its truth.—*Stille.* While it must be confessed that the degree of contagiousness of Scarlatina is not well ascertained, since where the element is once introduced into a family,—sometimes but one among several, and at other times the entire family take the disease,—and also from the fact that the protective power of any drug is difficult to be inferred with accuracy; yet, notwithstanding this, a large number of authors and practitioners of medicine have evinced interest enough in the theory to try the protective power of belladonna. In some of the discussions on this subject during the past winter, certain practitioners of my own age have declared that there are no good authorities for the use of this drug as a prophalactic. I beg leave, sir, before noting what I shall record in regard to the protective power of belladonna in this epidemic, to cite certain opinions in favor of and against its use, based on experience in previous epidemics.

It will be seen that we have authorities, and good ones, who favor the use of belladonna as a prophalactic in Scarlatina, while equally good authorities, although fewer in number, discourage it. In a word, the authorities differ, and consequently until a larger number of cases have been carefully observed, recorded, and closely analysed, and some kind of a deduction made, physicians as a body cannot be expected to either absolutely adopt or reject the agent. Each physician will examine the evidence in favor of, and against the remedy, and practice accordingly.

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FAVORABLE TO BELLADONNA.	AGAINST BELLADONNA.
Bayle collected nearly all published evidence up to 1830, and states the following as the results: 2,027 children and adults made use of the drug; 1,948 escaped, and 79 contracted the disease Stelle believes the experiments were made by competent persons, and does not question the accuracy of the results. In 1840–'41, M. Stievenart tested the question in the villages around Valenciennes. Two hundred out of 250 persons in one, took belladonna, and escaped, while 14 of the remaining 50 took the disease, and 4 died. He also records other favorable testimony. Dr. J. C. Morris administered the medicine to one-half of the children at the Preston Retreat, Philadelphia, and found that 53 per cent. of these were attacked, while 73 per cent. of the remaining half had the disease. Hufeland, in Germany, and Guersand, in France, most eminent physicians and authorities, advocate its use—the latter stating that he never failed to employ the method we are discussing, and that he had remarked the almost certain immunity of those who were subjected to it. Burnett gave it to 120 children, of whom only four contracted the disease. Schenck administered it to 525 persons, and only three took the disease. M. Biett states that those to whom it was given usually escaped. Dr. Irwin, of South Carolina, gave it to 250 children, and less than half a dozen took the affection. Those families which did not take the preparation were, with hardly an exception, affected. Rilliet and Barthez think it worthy a trial. Prof's. Meigs and Pepper think favorably of it. Dr. McKee, of South Carolina, thinks he used it with success. Dr. Porcher, after a review of 400 volumes, of literature on the subject, expresses himself in favor of it; and Prof. Stille, after reviewing the whole subject, say: "We feel bound to express the conviction that the virtues of belladonna, as a protection against Scarlatina, are so far proven that it becomes the duty of practitioners to invoke their aid whenever the disease breaks out in a locality where there are persons liable to the contagion,—particularly in boarding-schools, orphan asylums, and similar institutions, and among the families of the poor; whenever, in a word, it is difficult to place the healthy at a distance from the sick.	Lehmann and Wagner have given it, and derive no benefit whatever. Prof. Condie says: "We never found it in any to exert the slightest influence in mitigating the character or preventing the occurrence of Scarlatina." Prof. J. Lewis Smith believes, from the weight of evidence, that it is entirely inert. Dr. Andrew Wood, at Heriot's Hospital, Edinburgh, and Dr. Alley, at the Orphan's Asylum, Boston, experimented with it, administering it to one-half the children in their institution, and, to use the words of the latter, "there was no manifest difference between the two classes as to susceptibility to the contagion; and Thomas, in his exhaustive article in Ziemssen's Cyclopædia, speaks of belladonna as the "much vaunted pseudo prophylactic.

In the epidemic through which we, it is hoped, are now emerging, belladonna has been administered by practitioners of all schools, but has not, as far as I am informed, added anything favorable to its former reputation. In my own practice I have not yet seen a fatal case where it had been administered, although many have taken the disease; but in all cases the termination was favorable. It seemed to mitigate the character, but did not destroy the susceptibility of children to take the disease. In 430 children where it was administered in the practice

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of physicians who honored me with a report, 100 had Scarlatina, and I have no doubt but that the number of physicians in this city, who had confidence in belladonna as a prophlactic, is less than it was sixteen months ago.

The Sulpho Carbolate of Sodium.

In 1867 Dr. Arthur E. Sansom announced to the Obstetrical Society of London that he had succeeded in producing a series of double salts of carbolic acid, which promised to be of use in certain diseases, particularly in the so-called zymotic diseases. Among the preparations mentioned were sulpho carbolic acid, sulpho carbolate of sodium, ammonium and calcium. Of the metals proper, he obtained the sulpho carbolate of zinc, copper and iron. All these were of crystalline form, of perfect stability and very soluable. It was believed by Dr. Sansom that the carbolic acid was the important agent in these salts, dependent upon its known power to arrest fermentive and putrefactive changes externally. Can these processes be annulled internally? The sulpho carbolate of sodium is exceedingly soluable, and to an adult patient a drachm, equivalent to 20 grains of carbolic acid may be administered every four hours. According to the deductions of the discoverer, this large quantity is rapidly absorbed from the stomach without decomposition; in the tissues sulphate of soda is eliminated and carbolic acid set free—the former being excreted by the kidneys, and the latter by the lungs. Dr. Sansom did not have the opportunity of employing these agents, especially the sodium salt, in a large number of cases, and says in conclusion that he should be greatly misunderstood, if it is thought that his communication was intended to establish the proposition, that the sulpho carbolates constitute the remedies, *par excellence*, for the diseases enumerated. What he had said, he hoped, would place them on trial.

Prof. J. Lewis Smith, looking toward the antiseptic method in medicine, in the second edition of his book, (1869) uses the following language:

"It has been proposed in this (diphtheria) and other zymotic diseases to give medicines to check the supposed fermentive processes going on in the economy, and by this means to ameliorate if not entirely control the morbid action. Prof. Polli, of Milan, has recommended for this purpose the sulphites, in the

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belief that the sulphurous acid set free in the system by their decomposition prevents, or tends to prevent, catalysis. Experiments have shown that this agent does check fermentation without the system, and the theory possesses a degree of plausibility. But in such matters the only reliable guide is experience. If experience shows that the sulphites are beneficiel in the treatment of the zymotic affections, then, and only then, are we justified in employing them. It is difficult to determine the value of any medicine in the treatmentof the zymotic diseases, since so many cases terminate favorably without any medicine; but some of the physicians who have used the sulphites speak favorably of their effect. My own experience with them has been limited. I have seen improvement in severe cases of Scarlet Fever where these agents were employed, but remained in doubt whether the improvement would not have followed the use of other measures. It does not seem judicious, until they are more fully tested and are found to accomplish what is claimed for them on theoretical grounds, to discard, in cases that are at all critical, those remedies which appear to be indicated by the nature of the disease."

In the third edition of the book (1876) the above is omitted. We would infer that "experience" had not shown it to be reliable.

Thomas, in Ziemssen's Cyclopedia, says, those symptoms due to the toxic effect of the Scarlet Fever poison, should be met by the administration of antiparisitic and antizymotic remedies, mentioning among others, the internal and subcutaneous use of carbolic acid and sulpho carbolate of soda. It does not appear that the writer had made use of them, but recommended them as being advised and found useful by Dr. Sansom. These preparations had been used in a few cases by several physicians, but not to sufficient extent to justify the exclusion of older and better tried remedies. At the commencement of our late epidemic, such extraordinary prominence was given to them—especially the sodium salt—that a number of practitioners, partly with the hope of meeting with the magnificent success promised, and partly to demonstrate its worth, guardedly administered the drug. The results are not flattering, and any claim, either as a prophalactic or as a curative agent, the sulpho carbolate of sodium

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may have had in Scarlatina has, I think, been very emphatically decided in the negative.

In 61 cases where it has been used for its curative properties, 10 have died, the disease advancing without the drug seeming to produce the least impression; and in 90 cases where it was administered for its supposed prophalactic virtues, 48 took the disease. Not only has it failed to mitigate a single symptom, after the development of the disease, or to diminish the susceptibility of those liable to contract it, but it has seemed to diminish the *vis medicatrix naturæ*, to lessen absolutely the chances of recovery, by its impoverishment of the system.

One physician of my acquaintance treated 22 cases with it and lost 5. In my own practice, the most distressing case of diphtheria that I have had in the year developed in a scarlatinous patient, when the drug had been administered daily for two weeks. The system was completely saturated with the medicine, and yet the disease developed, and was rapidly advancing to an unfavorable termination, when older and better tried remedies were substituted, and happily the case recovered. In April, I was called to a German boy in the southeast part of the city, who had contracted Scarlatina at one of the private schools in that vicinity. He had come to his home, where three other children (two sisters and an infant brother) would now be exposed to his contagion. They were isolated as much as it is possible to isolate children in a house with but three or four rooms, and the sulpho carbolate of sodium faithfully administered. In seven days from the time the elder brother came home with the eruption on his body, the three other children took the disease, (sulpho carbolate of soda being used all the time, remember,) and in 2½ days the younger sister was a corpse, and in 5 the older sister was by her side at Walheim. The baby seemed to struggle between life and death for two weeks, but finally made a tedious and difficult convalescence, suffering with not only glandular complication, but deep-seated pharyngeal abscess and purulent arthritis. Previous to this sad experience my mortality had been 6 per cent., it was now a little over 11. In being sadly disappointed with what might be expected from this remedy, I am not alone, for several have communicated the fact to me that some of their worst cases were those to whom the

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drug had been administered, and Dr. A. H. Foster, in concluding a very full and complete report, says: "I have no confidence in prophalaxis—have seen the sulpho carbolate impair the health, weaken the appetite, etc., etc." In concluding my remarks on sulpho carbolate of sodium, I can only say, that from all the information I can gather, the continuous administration of the drug not only lessens the power of a system to resist prostrating disease, but is absolutely worthless as a preventive of Scarlatina, and furnishes another pseudo phantasm for the people to delude themselves with, to the neglect of *complete, rigid* and *continuous* isolation.

In conclusion, I desire again to thank the gentlemen and ladies who answered my communication, and to tender especially my acknowledgements to the Boards of Health and Education, and the Sewerage Department of the Board of Public Works. I have had access to all these departments of the city government, and have obtained information without which my report could never have been written.

ADDENDA.

AUGUST 1st, 1877.

The epidemic had continued to diminish in severity from February to May, when from causes I believe to be sufficient, and fully explained on page 144 of my report, it commenced to increase, and during the month of May the number of deaths from the disease numbered eight-two. This was not large, to be sure, but enough to increase the mortality, when there was every prospect of its diminishing. The death rate continued about the same during June, but in July we had a decided diminution, and at this date it seems that with the precaution which should still be exercised, no particular danger is to be apprehended.

MORTALITY BY MONTHS AND WARDS FROM TERMINATION OF REPORT TO DATE.

WARD.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	45	16	17	18	HOSPITAL.	TOTAL.
May.	1			4	7	14	9	3	3		2	6	8	6	9	3	2	3	2	82
June.	2			3	8	7	7	15		4	3	5	4	6	7	4	6		2	83
July.		2		2	12	8	4	7		5	3			6	5	3	2			57

The history of the epidemic during these three months has not been peculiar or different from the preceding eight months. The mortality has been greatest in those thickly settled wards,

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where from the large number of children in families, isolation is impossible. In view of the great number of infected points, which there will be at the opening of schools next month, it is very desirable that some scheme should be inaugurated by the Board of Health, with which physicians of all schools shall be in sympathy, in order to prevent, if posible, a second epidemic. If the Common Council would allow the Health Commissioner to exercise some discretionary power in regard to placing the scarlet fever card, I believe a larger number of physicians would report their cases. The number of each infected house should be published daily in the papers, and thus give warning to any who might contemplate visiting with children, any particular infected quarter. In addition let the public be frequently advised of the danger which attends exposure to the contagion and the comparative safety of isolation. And finally, can not some influence persuade both medical and non medical men and women, to cease publishing their own *peculiar* and *absolute prophylactic*. Every article advocating the use of any such remedy produces erroneous impressions among the people, and diverts their attention from *isolation*, which it is needless for me to say at this time, I consider the *sine qua non* in the control of Scarlatina.

[Applause.]

On motion, the report was accepted, and the thanks of the Society tendered to Dr. Earle for the same.

On motion the Society adjourned.

Afternoon Session—Wednesday.

The Society was called to order at 2½ P. M., by the President, Dr. T. D. Fitch.

The Assistant Secretary, Dr. Earle, read the names of the nominating committee, as follows;

NOMINATING COMMITTEE.

L. H. Birney, Champagne	Co.	W. L. Goodell, Effingham	Co.
P. H. Barton, Vermillion	"	W. P. Pierce, Cook	"
J. H. Ruder, Marshall	"	T. F. Worrell, McLean	"
D. L. Woods, La Salle	"	E. Wenger, Iroquois	"
W. A. Tyree, Dewitt	"	M. W. Seaman, Macoupin	"

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A. E. Goodwin, Winnebago	Co.	N. Wright, Sangamon	Co.
C. C. Hunt, Lee	"	E. R. Williard, Will	"
J. L. Kitchen, Bureau	"	J. F. Todd, Henry	"
Ellen A. Ingersoll, Fulton	"	M. W. Walton, Stephenson	"
J. S. Whitmire, Woodford	"	O. W. Moon, Grundy	"
J. L. Corcoran, Peoria	"	J. M. Steele, Edgar	"
J. S. Williams, Jersey	"	E. B. Shumway, Kankakee	"
B. F. Crammer, Jo Daviess	"	David S. Booth, Randolph	"
N. S. Reed, Cass	"	R. J. Patterson, Kane	"
J. V. Frazier, Mercer	"	W. H. McNary, Clark	"

Dr. J. H. Hollister, chairman, presented the report of the special committee on Dietetics and Hygienics. He announced preliminarily, that the report exceeded the length which the rule fixed for the full reading of a paper; when a motion was carried that the rule be suspended in order that the paper might be read in full.

The report is as follows:

REPORT UPON THE DIETETICS AND HYGIENICS OF CHILDREN.

J. H. HOLLISTER, M. D., CHAIRMAN.

GENTLEMEN: Your committee to whom this subject was assigned, beg leave to present the following report.

It has been deemed advisable to so treat the subject as to elicit full discussion on the part of the profession, and at the same time so to embody the conclusions to which we may arrive as to render them of practical utility to the masses of the people, whom they most deeply concern. We have chosen, therefore, to give the reasons which guide to our conclusions from a medical stand-point, and then to embody them in a summary of directions which may be of practical utility.

Writers have usually divided human life into five distinct periods:

The first period, that of *infancy*, extending from the birth to the completion of the first dentition, that is, to the age of two and one-half years.

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The second period, *childhood*, embraces that period from the age of two and one-half to fifteen years.

The third period, *youth*, dates from the fifteenth to the twentieth year.

The fourth period, *manhood*, reaching on from the twentieth to the sixtieth year.

The fifth period, *old age*, embraces the continuance from sixty to the terminus of life.

It is with the first of these periods that our report will mainly have to do.

Infancy, as the term implies, is that period in which a human being is without a language, and yet, though it may not be able to articulate its mother tongue, it *has* a language that no human heart can fail to understand.

It is truly the period of utter helplessness, and yet it has the power to command the purest and the strongest of human agencies.

Without judgment of its own, its support, its watch-care and its guidance are wisely committed to other hands.

And in the fulfillment of such trust we are permitted to behold such exhibitions of the better nature of the human race as could, perhaps, find expression in no other way.

How manifold, how pure and how potent are the outgoings of parental affection? A mother's devotion is without parallel as she wastes and wears herself out, oblivious of the sacrifice, if only her offering shall be a ministry of blessing to her child. How, too, the hope of reward lightens the burdens of the toiling millions, as men go forth and weary themselves with toil that its fruitage may minister to the wants and the delights of their little ones.

If, then, such weakness and utter helplessness is thus related to all that is manly in man, and to that which renders woman more angelic than human, it follows that, if by any means the health, or more, the life of the infant be imperiled, there will be called forth the most tender solicitudes and unselfish devotions of which the race is capable.

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When the tender infant lies dangerously sick, cradled upon its mother's knee, then the stalwart and the strong bow themselves—sleep departs from many eyes; waiting ones forget to eat their bread; griefs refuse to express themselves, while gentlest whispers bear telegrams of sorrow from heart to heart. And here it is that the ministers of our profession find such pure and delicate expression as words may not describe. So far as human agencies have permission, it is the physician's province to stay the ravages of disease, to avert the impending doom, to recall the hope that had forsaken the stricken ones, and to reclasp the hands which were so nearly parted. And so the family physican is enshrined within the household—not only a never-to-be-forgotten friend, but as in some sort a human saviour.

If such ministries were only rare and at long intervals, our subject would be divested of much of its thrilling interest; but unhappily these griefs are on every side of us, and in every household. We have only to turn for a moment to the mortality tables to discover, while the Reaper is gathering the bearded grain, *how many* are the flowers that fall between.

This period of infancy, the period of most delicate development and the embodiment of weakness, is nevertheless the period of most intense vital activities and physical changes; and it is during this period that life is imperiled as in no other.

And thus we find that one-tenth of the human race die before they are one month old, and more than one-half the human family before the age of five years.

The tables, both of England and the continent, confirm this fact as regards the old world, and the same is true in this country as well. We are not able to give as exact data for the country at large, but in the populous cities, where statistics are complete and reliable, the same fact obtains. For example, in New York City, twenty-six per cent. of the deaths are those of children under one year old; and fifty-three per cent. die less than five years old.

In Chicago, the statistics are as follows: In the year 1876,

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just past, the population of our city was estimated at *four hundred and ten thousand.* The total number of deaths reported was 8,573. Of those who died under one year old the number was 2,694. Those over one and under two years of age numbered 1,038. Those over two and under three years numbered 518. Those over three and under four years numbered 396. Those over four and under five years numbered 245. Making the total of deaths under five years of 4,891, or 57 per cent. of the entire mortality. These figures are enough to appal the stoutest hearts. They not only point to the untold sufferings that went out with these lives, from pain endured, but they remind us of the aching hearts and beclouded homes which have been on every side of us during the past year; but they speak to us from another stand-point. The voice of philanthropy and of pity not only ask if this *must be*, but the economist enquires as well, why all this waste? If life be valuable and men of public utility, what can avail to avert such destruction?

This leads to the consideration of the causes which produce such fearful fatality. Some of these are obviously beyond the agency of human skill, and while they swell the death-rate are not amenable to treatment. Such, for example, are the congenital malformations of infants—such as hydrocephalus and acephalous affections, spina-bifida, cyanosis, cardiac and pulmonary lesions, malformations of the secretory and digestive organs, and failures of development of almost an endless variety.

Hereditary taints are apt also to manifest themselves early, and many times these baffle the best directed efforts.

Inherent weakness at birth is a most fruitful source of fatality. A feebly developed organism is often entirely unequal to the wants of life, and in the unequal struggle that life goes out.

And strange to say, a like result of feebleness inheres from the very opposite extremes of human condition.

They have their birth in the palace, on the one hand, and in the storm-beaten hut, on the other. Poverty and over-work

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are hardly more prolific of such results than are the idleness, the excesses, and the nervous prostration of those that never knew the luxury of labor nor the stimulus of necessity. In either of these extreme conditions, the children are the first to droop and die.

Another fruitful cause of infant mortality, is from their exposure to contagious diseases. These are so widely diffused that prevention from exposure is almost beyond question, and their severity is such that the hazard is very great. Most of these, though capable of communication, at any period, are deemed the diseases of childhood, since it is wellnigh impossible to escape exposure to them till a later period. Much of the *fatality* will be averted when sanitary rules are wisely and rigidly enforced. Another, and a frightful cause of death, is found in the improper hygienic conditions of the homes where children are *born* and *reared*, if reared they may be. Necessity may sometimes seem to compel a residence in a miasmatic or pestilent district; but the cost of such exposure is often fearful. In some of our western localities, it has been at the expenditure of a generation of lives, that the waste places have been reclaimed to proper sanitary conditions. The lessons that come to us from dark and narrow streets, from filthy and overcrowded tenements, from defective and deficient sewerage, and from the unwashed multitudes that inhale such noxious vapors, are too obvious to require explanatory note or comment.

The summer diseases of children—the pestilence of cholera, malignant fevers of every sort—and all the army of pestilences have standing and pressing invitations to enter in and *do their worst.*

When thus they do the bidding, they sometimes reap such harvests as appal mankind; and so wise men bestir themselves and call for the enactment and enforcement of health laws. Physicians, too, as wise, meet in grave conclave and pass most solemn resolutions, acknowledging the presence of and afflictive dispensation of Divine Providence, and warn the people *what not to do*; after which the fathers again fall asleep, and all

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things continue as they were, the same death-rate is maintained, and fear gives way to unconcern, since those that fall are mainly little ones.

Another cause, not so prolific perhaps of mortality, and yet an important one, is that of improper clothing. A large number of inflammatory diseases, especially those of the respiratory organs, are due to improper protection of the person by clothing, when subject to sudden and severe variations of temperature.

A very great number of local affections, which often prove fatal, are the result of careless and criminal exposure. It is proverbial that intense cold greatly increases mortality, and this is especially true of the two extreme classes of infancy and old age.

Another pregnant cause of fatality is that of *improper food.* Infants are many times the subjects of most erroneous and hurtful alimentation, and the consequences are beyond conception. Errors, there are, as to quantity—more frequently as to kind; *but* most so as to quality. At that age, the requirement of food is much in excess of the waste, and if the needed variety and proper quantity be not supplied, there must of necessity be the failure of proper development.

In a perfect food there must be represented the proportionate elements of every tissue and secretion. It is therefore of first importance that the varieties, the quantities, and their perfect assimilation be assured. It is probably in imperfect or improper preparation of foods for assimilution that the greater error lies, and to this we shall turn attention, at the appropriate time.

Aside from these causes there remains one fruitful cause of mortality of which it is essential to speak, and yet which falls rather to the physician's care, than to the hygienic labors of the laity. I allude to the enteric diseases, from which so many die, during the *second summer.*

These affections are too serious, and too grave, to be trusted to unskilled hands, and demand from first to last the guiding supervision of the family physician. We anticipate a reference

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to them in a special contribution to this report, and therefore they will not be particularly noticed here.

Having thus passed in rapid review the more obvious causes of infant mortality, it may be well to consider them in order, and determine, so far as we may, to what extent they may be mitigated, or controled.

First, hereditary taint. Upon this point, a volume would be required to set forth those facts which should be known, and which should dominate over the development of progeny. The crime of incestuous consanguinity is so apparent and the penalty so retributive, as to have rendered it a matter, long since, of civil jurisdiction. The stamp of public opinion has been so firmly placed upon it that grievous offences are of rare occurrence, and the sharp outline of that seal should never be effaced.

But the long-continued habit of the intermarrying of near relatives has, and does work its evils; and they become too apparent to be questioned. To the most pernicious results, even royal blood can offer no exception.

Tuberculosis is a sad entailment. The intermarriage of families in which, on both sides, there is this predisposition, bodes only evil. And the propogation of the race upon such a parentage seems nothing less than criminal. We believe that it should be established as a rule that families thus predisposed, should never be allied by marital relations. Nor should those who are themselves the subjects of advanced disease, *assume parental relations.*

The Devil fired the charnel house of earth when he whispered in the ear of youth, that it was a gay and manly thing to turn aside from virtue and from rectitude, to "sow wild oats," the while. He would be surely wiser when he knew both good and evil, and then the conquest of evil and the settling down to sober life, would show the grandeur of the man. Ah! how the stranded wrecks which lie in heaps along that fatal way, warn of the dangers to be encountered there. To many sad hearts such reformations never come, but hopeless debasement and maudling imbecility instead, and such bodily

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contamination as only end with death. And so, the alms-house, the hospital and the prison cell are largely given over to such a peopling. But the saddest fact remains that the evils of their vicious lives are entailed upon their progeny, to the third and fourth generation; an entailment which taxes to their utmost limit the contributions of the benevolent, and the skill of the physician, as well. If erring youth at the outset of his mad career, could but behold the fruitage of vice as it *blisters* and blights, and buries from sight the innocent suffering progeny of his begetting, such effects, in the main, hidden from view, would *startle*, and perhaps *deter*, from such criminal sowing of the devil's oats.

It is the height of wisdom, to teach that *physical* fitness, as well as *moral*, should enter into the estimates which govern marriage relations. It is essential to teach that when by reason of profligacy there would be the entailment of disease upon an innocent progeny the development of parental relations is an *unmitigated crime.*

Again, parental relations are such, to their posterity, as to demand by every attainable means, the securing of health and vigor to parents themselves. Such development should be the matter of studious care in the *palace*, and all the essentials of hygienic culture should have observance *there;* while the equal solicitude to avoid overwork, undue want, and all forms of dissipation, should be as keenly felt by those who earn their bread by constant and severest toil.

We have dwelt upon this point to the more impress the fact, that the hygienics of children has not only to do with *themselves*, but in a most important sense with their *ancestry* as well.

In the third place, sanitary supervision of epidemics is one of the most obvious and imperative obligations which the body politic owes to its citizenship; and here legal authority and the citizen should strike hands in intelligent co-operation. It is well nigh impossible for either party to attain success unaided by the other. The citizen is powerless without the aid of civil authority, and the law may be grievously evaded by connivance of the masses.

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Where so much may be done by timely advice, by change of location, by thorough disinfection, and by complete isolation, it is criminal to permit contagious diseases to become epidemic simply by neglect. And even when they have escaped all barriers, and have become wide-spread, the thorough and persistent efforts of a sanitary police may finally stamp them out.

We hardly need adduce a better instance in proof than in the control of the recent epidemic of scarlatina in our own city. Nor is such sanitary supervision needed in our cities alone. The State at large has common needs, and a State Board of Health is so obvious a necessity, that the needed legislation for its creation should not be long delayed by so intelligent a body as our State legislature.

Fourth. The condition of the *homes* where children are born and reared, should be a matter of careful inspection, and diligent supervision by properly constituted authorities. Experience has shown that it is unsafe to relegate this care to the occupants alone. Personal cleanliness and proper ventilation can not be absolutely under legislative control. But the foods that are marketed can be under strict surveillance, and protection from sewage gases and emanations from the decomposition of accumulations of organic filth, can be assured and guaranteed to every citizen where the proper laws are wisely executed. Methods of living, incompatible with the general health, are public misdemeanors, and should be treated as such.

Fifth. In regard to improper clothing. Here again offences against sanitary rules confront us from two opposite directions. In their poverty, little ones are so often ill clad as to be able, but very imperfectly to withstand the extremes of temperature to which they are subjected. From severe and ill-timed exposures many of them acquire acute diseases, with fatal results.

Another criminal neglect is that when for appearances sake, while the neck and chest are muffled, and the feet are perhaps well covered, the knees must needs be nearly bare. Fashion in this, as in some other things, has no business with such a

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following. And there are other neglects in clothing which need reform. The exposure of the person of the little child to the vicissitudes of temperature during the sleeping hours, is fruitful of great evil. How many children are suddenly and severely affected for the worse, by sudden changes of temperature at night time in the summer month, when they are restive as well as restless. The methods of clothing to prevent such exposures need radical reform in many households, and better health with less medication could be thereby assured.

We come lastly to consider the important subject of *Dietetics.* It has been a vexed question, which many anxious hearts have sought to solve,—when, how, and what to feed children? To answer this question intelligently requires that we shall know, first, what the requirements are, and secondly, how they can be best supplied.

The chemistry of the tissues give evidence of the elements needed for their replacement. The analysis has been often repeated and the tabulated results are stated at length in the many works which treat of this subject. Of the eighteen chemical elements of human tissues it is hardly necessary that enumeration should be made. This one fact, however, is important, that knowing the chemistry of the tissues we should be familiar with the foods which may best yield the varied and proportionate supply for their nutrition. And, it is self-evident, that no article or combination of articles which does not represent them in due proportions, can be esteemed a proper food.

In considering foods from a chemical standpoint, Liebig arranged them into two great classes; the histo-genetic, or tissue-making, and the calorifacient, or heat producing agents; while, in general, such a division may be serviceable, it is by no means, strictly legitimate; since later investigations and experiments have shown, that fat enters into the formation of nearly all cell structures, thus becoming a tissue element; and secondly, that while subsisted, upon nitrogenus foods alone, still fats may be from this source developed within the *animal economy.*

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The fact of the presence of the various elements in evidence of their necessity to the well being of the human body. It would be interesting to discuss the purposes that they severally serve, as has been done by Dr. Mary Putnam Jacobi, of New York, in her valuable little hand-book upon "Infant Diet," and by other writers upon organic chemistry.

In the selection of foods, two points are to be kept in mind; 1st, to secure the elements needed for nutrition; 2d, so to select or combine them, that while securing the needed amount of one article, we may not on the one hand needlessly surfeit the body with an excess of another; or, on the other, withhold its requisite supply. Pavy, in his work on "*Food and Dietetics*," has ably discussed the question of combinations, so as to secure the desired results in the most economical manner.

The milk of the mammal, and the egg of the ovipara alone represent, in themselves, all the elements required for tissue growth. It is idle to question the wisdom of combination in these articles. The facts that the best results are obtained from *their* use, is proof that they are best fitted for their purpose.

I think the fact will not be questioned that the best food for the infant is that which Nature has provided; namely, its *mother's milk.*

Statistics without number show conclusively that nothing else can as well be substituted for this natural food.

Dr. West says this, in his Lectures upon "Diseases of Infancy and Childhood:" "The infant whose mother refuses to perform towards it a mother's part; or who, by accident, disease or death, is deprived of the food that nature destined for it, too often languishes and dies. Such children you may see with no fat to give plumpness to their limbs, no red particles in their blood to impart a healthy hue to the skin; their faces wearing in infancy, the lineaments of age; their voice a constant wail, and their whole aspect the embodiment of woe. But give to such children the food that nature has designed for them, and if the remedy does not come too late to save them,

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the mournful cry will cease; the face will assume a look of content; by degrees the features of infancy will disclose themselves; the limbs will grow round; the skin pure red and white, and when at length we hear the merry laugh of babyhood, it seems as if the little sufferer of some weeks before, must have been a changling, and this the real child brought back from fairy land."

Only at birth do the processes of digestion begin their work. There is, as yet, no provision for mastication, and no secretion of saliva. Now the alimentary canal is tender and impressible, so much so, that indiscretions of the mother in matters of diet are quickly visited upon the child. Till the appearance of the first teeth, it may be laid down as the rule, that the mother's milk alone, should constitute the sustenance of the child.

There are numerous causes which may render the mother's milk more hurtful to her child than alien food. It may not be sufficient in quantity, and it may be sadly at fault in chemical constituents; it may be contaminated by constitutional disease; it may disturb by causes which elude detection; and there are other conditions which contra-indicate continued nursing, such as the recurrence of excessive menstruation or repeated pregnancies.

There may be mechanical hindrances too, such as deficiency of development of the mamary gland, or of the nipple; or there may be deficiencies in the organs of the child, such as cleft palate by which the mechanism of suction is impaired or absent.

There may also be such manifest exhaustion on the part of the mother, as utterly to forbid the nursing of her babe. And so the important question comes for answer: If the mother cannot subsist her child in the manner nature has ordained, what are the most available substitutes which may be sought insteau?

Doubtless, the procuring of a wet-nurse who has the capability for giving healthy and abundant nourishment affords the best substitute, [and gives least hazard to *the child.* This

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substitution is often a matter of positive benefit where the mother was incapable of performing this office well. When the mother is debarred from nursing; where the situation of the family can warrant the expense, there is hardly a question as to what the physician's advice should be.

But in a great number of instances, recourse must be had to artificial feeding, and it is at this point that very plain and simple instruction is needed, and should be so presented by those who are prepared to speak, as to answer a very general want. Next to the supply from the wet-nurse, food derived from the lower animals is to be sought. Of these, the milk from the cow, the ass, the goat and the ewe have been most in use. Cow's milk is most readily obtainable, and is most commonly used as a substitute for the mother's milk. It can be so modified as to quite or more nearly resemble the natural food than any other; and in those localities where fresh supplies can be had of pure milk, the danger of artificial feeding steadily decreases, till, in some localities it seems almost as favorable as *wet-nursing*.

Not every cow yields the quality of milk upon which a child may thrive, and care is needed to procure that, which evidently agrees with the child; when this is found, it should furnish the sole supply of nourishment during the first or tender months of *infancy*.

It is a great mistake, to rely upon the various artificial foods of *starchy* nature for the food of infants, till after they are five or six months old. Starch has no representation in milk. Nor are the digestive organs so matured as to handle it well till after the lapse of a few months.

Liebig is of the opinion "that the early use of farinaceous foods are the causes of most of the diseases, and of most of the deaths of infants." Of the use of condensed milk, with or without sugar, as now found in our markets, it may be deemed next preferable, when properly diluted, when pure, fresh milk cannot be obtained. It is preferable to bad milk at any time, and should be prefered for a careful trial, in preference to the starch preparations so much in vogue. At the period

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of seven or eight months, the child, if till now well nourished, has reached that stage of development when solid food may be of use. Now the various starch preparations as found in bread, in biscuit, in oat meal, in barley, flour, etc., may with great advantage be added to the milk. At the tenth month these articles with cows milk, should form the staple articles of diet; and now, if it has not been done before, the mother's milk should be withdrawn. As the child advances in its second year, a more mixed diet is usually craved, and meat may be safely added.

Growing out of the discussions of this subject, are some plain practical questions, the answers to which will furnish the conclusion of this report; they will be embodied under the general head of—

HINTS CONCERNING THE HOUSEHOLD.

1st. What constitutes a family?

The union in lawful marriage of one man and one woman; obviously no less and actually no more—and they shall be no more twain but one: as inseparable as the two halves of a human body, joined in the mesial line: never divorced for incompatibilities, and if for crime, only because perdition was made for such.

2d. Who may enter into this relation?

The man 24 years of age, of sound and disposing mind, who has the brain, the muscle and the will to maintain himself and one or two more besides, and who has demonstrated the fact by actual experiment. The woman also, of twenty or more summers, who will consent to work, if she shall be obliged to; who is willing to make her husband and her home her paramount attractions, she who is rather local than itinerant in her interests and her affections. These if not too nearly related, and not alike contaminated with dangerous hereditary taints, —these may be married.

What is a home?

One room if need be—more rooms if may be—the abiding place of one family and no more. The boarding-house is a bad device, and they that go in thereat, at the last, pretty surely

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become demoralized; at least as regards themes of conversation and contentment.

4th. Who should be the inmates of a home?

One husband, one wife, the children, and only as many more as the dictates of duty require that provision be made for.

5th. What of its surroundings and its care?

1st. It should be located in the most healthy section possible.

2d. It should be sufficiently weather-proof.

3d. Within and without it should be kept scrupulously clean.

4th. It should be so ventilated as to have free change of air every day.

5th. Its drainage should be such that no pestilent vapors would contaminate its atmosphere.

6th. No filthy accumulations should be tolerated upon the premises for a single day.

7th. It should by simple adornments give the impression of comfort and good cheer.

8th. The habits of the household should be well-ordered and uniform.

9th. It should be the keeper of its own counsels, and yet the birthplace of all proper neighborly courtesies.

With such parentage and with such a home, it is no misfortune to be born; otherwise it is.

Well, if then and there a child be born; then what of that?

Much every way—much if all is *well*—and more, if all is wrong.

And what is well?

1st. Ten days of quiet rest for the mother; with all her cares assumed by a skilfull nurse, or committed to some tried and trusted motherly friend, who knows the needs and motions all by heart.

But save that mother in those hours, from that garrulous nurse, whose recitals of horrible cases, and personal griefs, and family afflictions, are well nigh exhaustless, and who is not entirely *indifferent* to the man of the house.

Save her also in the absence of a nurse from the daily visits

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of 19 or 20 good meaning female neighbors, who agree in a few things, that they may differ the more decidedly in more.

Well! what say you, has all this to do with hygienics? Let us see. To be born of healthy parents, free from herediary tatint, in a pleasant healthful home, and to be carefully nursed by a well recovered mother, is a matter of no small moment; for upon these essentials turns the future welfare of the child.

And what of the father?

Well, leave him to the enjoyment of his newly acquired wealth; forgive his innocent exaggerations, and the buoyancy and the promptness with which he pays the newly contracted bills. As the years go by, and he gains from repeated experiences, his ardor will abate and his promptness will sufficiently sympathize.

But what of the child?

Aye much of that. *First*, it must be washed and dressed. The liberal lap, the sponge, the soap, the tepid water, the soft flannel to cover the parts as they are cleansed; the quickly drying, and the careful *dressing*, these are the incidentals and the first ministries. *Then what?* Lay it away to sleep. How long? Till it nestles and appears uneasy. Shall it now be fed? No, not at all; a half teaspoonful of not very cold water was given at the first to see if it could swallow. Will it not starve? No, not for three days will it suffer. Nature has provided for this. When shall it be applied to the breast? As soon as the mother is well rested and perhaps refreshed with sleep. How often shall it be placed for nursing? Say every three or four hours, except when sleeping. What shall be done if it sleep all the time? Let it sleep. When roused then educate it gently and carefully to the breast.

Will it get all the food it needs? It will. Keep from it all sops and teas and paps and panaceas. Before it is at all in peril its food will be provided.

How often should it be changed? As soon and as often as it is soiled.

How often should it be washed? Each moring it should

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have its rapid, gentle sponging, and being quickly dried should be comfortably but not oppressively clad in flannel.

If it cries, what then? Let it cry. It is a safe and salutary employment when not excessive. It expands the chest and purifies the blood. If it is too restless at night, shall it have nostrums and soothing syrups? Not any. Discharge the nurse that drugs the child to ensure her sleep. Let no medicines of any sort be given but with the knowledge of the attending physician. Beware of the prescriptions and counsels of those that are over wise and benevolent of advice.

How often at the first should a mother nurse her child? About every two hours; after the first month, about every three hours during the day, and once or twice, if it awake, during the night.

Shall a babe be nursed simply to quiet its crying? No, not if it is not hungry. Let that be the last resort, and as it is restless, when it is older, give it water rather, for it may be thirsty, and often water is better than food.

How long should a mother nurse her child? Till it is ten or twelve months old, if vigorous, and during the second summer, if she is vigorous and it is feeble.

Should a child be weaned at once? Not if there be opportunity to do it gradually. Should a child be weaned during the heat of the summer months? Not by any means, if it can be avoided.

When is it necessary for a mother to desist from the effort herself of nursing her child? The attending physician alone, is capable of answering that, and he should be consulted.

What is the best substitute for the mothers' breast? That of a wet nurse.

What should be her qualifications? She should be in healthy condition; not over fleshy; twenty to thirty years of age; a brunette rather than a blond, with full and well formed breast, showing well developed veins; of good repute; of kind and gentle disposition and *honest in every attention.*

What is the best substitute for human milk? That of the cow. In its natural state? No, not till after four months;

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then it will do. How shall it be prepared? Let a quart of it stand for two hours; then take nearly the amount required from the upper portion. Add to it when well warmed, one third as much of boiling water and cool to the natural temperature of the body. Add a very little sugar and feed immediately.

How often should food be thus prepared? At least from twice to three times a day.

How much will a child require at once? Probably from two to four ounces, according to the frequency of the feeding; during the first month, from twenty to thirty ounces in twenty-four hours.

What of condensed milk? Let that be used when good fresh milk is not at hand, but be sure that it is diluted to the natural standard.

When may foods made from grains be used? Not safely till after the fifth month. From that time on, they may more and more be used, and meats and solid foods after the second summer.

If troubled with bowel complaints, what then? Consult with your physician, and follow only his directions.

What if the child have worms? Ask the doctor about that, too, and go light on all sorts of vermifuge.

When shall a child be vaccinated? When the weather is moderate, and after three months, at any time when it is in good health. If exposed, it may be vaccinated at birth. Don't overlook, and so neglect the matter entirely.

What if the child has fits? Well, in the first place, don't be frightened out of all your wits. Don't send for more than three doctors in one breath,—it usually confounds confusion, —and be pretty sure that your first fright will be well over before the nearest doctor will probably arrive. In the meantime, what is to be done? Just this, and nothing more: Spread a large comforter over the cradle, the lap, or the bed, where the child is to lie. Divest the child of clothing, at the moment you have a flannel sheet, wrung dry from water as hot as the hands can bear; spread the wet flannel upon the

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the comforter; place the child upon it, and quickly envelop the body in the wet blanket, and around this wrap the comforter. Let the head be well exposed, while the body is warm and moist. Dip your hand in cold water, and gently bathe the child's head, and it will be kept sufficiently cool by the evaporation.

Shall you let it go to sleep? Of course, you will. Let it remain thus enveloped till it has been quiet and perhaps unconscious, for 15 minutes; then substitute a warm, dry flannel for the wet one; envelop it as before, and let it rest absolutely quiet, till the doctor comes. He will divine the cause, and give the needed advice.

What about contagious diseases? Avoid them if you can, and when you suspect their appearance, seek medical advice early.

What about baths for children—shall they be cold or hot?

The infant should have daily spongings with water, neither hot nor cold, but tepid. As the months go on, if hale and vigorous, it will best enjoy water at the temperature of the room; but, if feeble, warmer water should be used. Warm bathing is to be avoided in the main.

How long should the child remain in the bath? Not over 10 or 15 minutes, and then be quickly dried and clothed.

What of out-door exercise? The vigorous babe, after 5 months, should have the open air every pleasant day, but in sleet, and storm, and driving wind, in-door exercise is safest and best.

If, in any case, good milk cannot be had, or, if it can, if it is not well borne, and later, when they will be needed, what preparations are best, and how shall they be prepared? Well, here are eight of those the most approved, and the trial will decide the choice.

I.—COWS MILK.

The upper portion of milk after standing two or three hours, one part; boiling water, two parts; sugar, one teaspoonful to each pint. Cool, and feed when of the temperature of milk fresh from the cow. This for a child one month old or younger. After the first month add an equal part of water; after two months, add one part of water to two parts of milk.

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II.—CONDENSED MILK.

Condensed milk, one part, boiling water, ten parts. Cool, and feed when lukewarm. After the first month, gradually increase the proportion of condensed milk.

III.—ARROW-ROOT.

Mix thoroughly a teaspoonful of arrow-root with a sufficient amount of cold water to form a paste; add a half pint of boiling milk, and stir briskly; boil for a minute or two, and add a very little sugar.

If milk is not well borne, double the amount of arrow-root, and substitute boiling water for the milk.

IV.—BOILED FLOUR.

Tie up one pound of flour tightly in a linen cloth; dip it several times in cold water; dredge the outside with flour till a crust is formed around it, to prevent the water soaking into it while boiling. Boil for a long time. When cool, it becomes a hard dry mass.

This is to be grated and prepared like arrow-root. Finely pulverized cracker-powder may be used the same way.

NOTE.—No. 4 is a desirable preparation in cases of diarrhœa.

V.—MEIGS AND PEPPER'S FOOD.

Fresh milk, one gill; fresh cream, one eighth of a gill; gelatine, twenty grains; arrow-root, one teaspoonful; water, one half pint. Soak the gelatine in the water, cold, for a short time, then boil till dissolved. Prepare the arrow-root with a little cold water as a paste, and while the water is still boiling add this and the milk, stirring the mixture constantly for a few moments. At the moment of removing from the fire, add the cream and a little white sugar. After the first month, increase the proportions of milk and cream, but not of arrow-root and gelatine.

VI—MEREI'S FOOD.

Arrow-root, one teaspoonful; water, three gills; boil. Of the above, three parts; fresh milk, one part. Boil for a few minutes, and add a little cream while cooling. Two tablespoonfuls of cream sufficing for twenty-four hours. As the child grows older, increase the proportion of milk, but not of cream.

VII.—RAW MEAT.

Select very tender beef, cut very fine—pound in a mortar to a pulp. Strain through a sieve or fine cullender; add very little salt. It may be rolled in little balls and powdered with sugar. Give not over three teaspoonfuls the first day in divided doses; increase the amount each day as the child may desire.

VIII.—BEEF TEA.

FOR ADULTS.

Lean beef, in shreds, one pound; water, one pint. Boil for twenty minutes; skim. Cool, strain and season. For an infant, this preparation

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should be properly diluted with water, or with barley, oat-meal or arrow-root gruel.

NOTE—Instead of arrow-root, (see No. III.) barley-meal, oat-meal, stale bread, corn-starch, and many patent preparations are often substituted, and are prepared in like manner, and they often admirably meet the child's wants. Great care should be exercised that foods thus prepared are not permitted to become *sour*. This may be prevented by adding to the quantity needed for a future feeding a grain or two of soda, or a tablespoonful of lime-water.

How shall a child be fed? Through a nursing bottle when you can, with a spoon, only when you must.

If the food is apt to sour upon the stomach, what then? Add a table-spoonful, or more, of lime water to each feeding.

What of cleansing nursing bottles? Be more careful of this than of all else. Scald the bottles every day in water to which a little soda has been added. Cleanse every part with care, and keep them under cold water, when not in use.

With these answers to many simple questions, trite indeed to the physician, but so important to be known in the family, we close our chapter upon

HINTS CONCERNING THE HOUSEHOLD.

And with these views with reference to the physical development of parents, with reference to marriage, hereditary taint, properly appointed homes and nursery rules for the handling, clothing, nursing and feeding of infants, we close our report upon the dietetics and hygienics of children.

Dr. S. H. Birney in the chair.

Dr. N. S. Davis moved that the report be received and laid on the table, until the remaining report from the same committee should be read.

Carried.

Dr. Matthews, a member of the committee, read the following report:

A CONTRIBUTION TO THE REPORT OF THE COMMITTEE ON HYGIENICS OF CHILDREN ON PHIMOSIS.

BY J. P. MATTHEWS, M. D., CARLINVILLE, ILLS.

MR. PRESIDENT AND GENTLEMEN OF THE ILLINOIS STATE MEDICAL SOCIETY:—

My object in the following paper is to bring before the so-

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ciety, a few cases of peculiar nervous phenomena observed by me during the last year, which, there is reason to believe, were caused by congenital Phimosis.

My attention was first called to this deformity as a cause of some of the reflex neuroses in children, by the recent work of Prof. Sayre, of New York, and without wishing to be considered too enthusiastic upon my subject, I fully believe, that, though by accident, a discovery has been made, that has stripped the veil from obscure disorders of the young, and caused a dark cloud to pass away, that the profession may see more clearly, that which has been doubt and in darkness, and be able to offer relief to many who have been doomed to misshape, an unseemly sight to their friends and a misery to themselves through life.

Case I. A boy aged 11 years, of nervous temperament, choreic, with the usual involuntary movements of the muscles of the face, as well as seeming general want of cordinating muscular power, was brought to me just before the aforesaid observations of Dr. Sayre had come to my notice.

The usual remedies were prescribed, with the injunction, that the rules of hygiene should be strictly observed. Expecting as usual, that after the completion of the second dentition, the vismedicatrix naturæ would repair all damages. An interval of a week or two passed before again seeing the boy's father, during which time I had read Dr. Sayre's report. It was surmised that this might be a case of neurosis, dependent upon an unobserved phimosis as a cause. The father was questioned as to this trouble, and on arriving home, finding the urinary organ diseased, naturally wondered at my not satisfying myself during the patient's visit. During a visit to Jerseyville, his former place of abode, as I afterward learned from the father, Dr. Gill saw the case and operated for phimosis, and a complete recovery from all the former symptoms gradually ensued.

Case II. W. K., aged 19 months, of healthy parentage, was brought to my office, with the statement from his mother, that he could not walk, was palsied, and had been growing

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worse for a week or two. Had always been perfectly healthy; no diarrhœa, good appetite, etc., till quite recently, when he began to decline, and the above symptoms, with restless nights, and nervousness by day, began to make sad inroad upon the previous healthy appearance of her once active little boy.

He had, unobserved by the mother, a congenital phimosis, and while in the office passed a large quantity of urine through a very small and inflamed preputial opening, during which, he evinced signs of suffering, in proof of the fact that it had been retained from fear of the pain produced by the evacuation. The parents who feared the child was "palsied for life," were told that this deformity was undoubtedly the cause of his lameness, and that circumcision was advised, with some degree of assurance that their darling boy would recover.

During the operation that was performed the prepuce was found so tightly adhered to a purple colored glans, that it required some degree of force to separate them, by peeling the former from the latter. Masses of sebacious matter escaped, that were bouud by the adhesions, of sufficient quantity to constrict the urethra; impede the circulation through the glans, causing its purple color, and was undoubtedly a factor to the pain produced during micturition.

The child was given no medicine, nor has been seen since by me; but reports were brought that he had recovered from the paralysis, as well as all other derangements that presented at the time of the operation.

Case III. W. B., aged 13 months, nursing, and up to two weeks previous to my seeing him, was as the parents stated, apparently well.

This child was seized on the night of December 6th last' with an epileptic form of covulsions. The father requested a visit.

Regarding it a case of convulsions, met so frequently by every physician—that occurs in children of nervous temperaments, during the reaction that takes place between the cold and hot stages of intermittents and infantile remittents, I did not then visit the child. Sent potas. bromide, and medi-

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cine to allay febrile excitement. The latter was not needed as no fever occurred. Was again summoned in the morning in consequence of another fit, and found him in the deep sleep that follows an epileptic attack; also, observed that the child had a congenital phimosis. Continued potas. bromide, and gave opening medicine, for while the former case proved pretty conclusively that phimosis was the cause of two forms of nervous derangements. I did not yet suppose it to be a cause of epileptic convulsions.

A careful examination for a cause of the trouble, revealed to my mind no clue, unless the phimosis caused it. No fever was present, nor was there any unnatural heat perceptible, either in the head or spinal column. The above remedies were continued, and instructions were left for the parents to send for me, in case the paroxysms returned. Another visit at noon was necessitated by their return, when the operation for phimosis was performed, with the assistance of my student, Mr. Dillard Berry. The operation rendered further visits unnecessary, as no more fits occurred. The parents themselves divided the sutures. Adhesions were fully as complete as occurred in Case II., and as much difficulty in separating the prepuce from the glans was experienced.

Case IV. A little boy, aged about one and a-half years, was brought to my office by his parents, who desired to have, as they said, something done for his lameness. This was a case similar, in nearly every respect, to Case II. He came from a distance and had an almost occluded prepuce. The diagnosis, however, or the fee required for the operation, so frightened the parents, who, notwithstanding their promise to return, have not again appeared, which, had they done so, your reporter feels confident would have added another to the record of cases relieved from the effects of a reflex irritation caused by phimosis.

Case V. Mr. A. requested me to visit his little boy, aged 2½ years, about the 15th of March last, with the statement that he had been restless at night for some time, with some difficulty in passing his urine. During my visit I found he

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had a congenital phimosis, with the prepuce much inflamed, and although the little fellow had an organization, remarkably perfect, with an excellent appearance hitherto, he presented, at this time, the appearance of a child that had suffered much more than was anticipated by the parents. The organ was found, while operating for phimosis, with adhesions as perfect as the other cases related, that had seemingly much more need of urgent treatment.

Case VI. Mr. C., of our city, has a boy, aged 8 years, who has been for four years a confirmed epileptic, with some days a recurrence of four or five attacks, upon whom I operated March 20th, last. He had an adherent and elongated prepuce, and while the operation has doubtless caused the attacks to appear less frequently, but not as yet arrested them, your reporter is firmly of the belief that the phimosis was a prime factor in the production of the disease.

Case VII. I was hurriedly called, last week, May 6th, by Mr. M., who resides but a few blocks from my office, to see his little boy, aged 15 months, and found him in a convulsion that required inhalation of chloroform and an enema of potas. bromide, to arrest. As soon as relaxed by the anæsthetic, I noticed he passed a large quantity of urine, also that he had phimosis with an inflamed prepuce, which I regarded the cause of the attack, as very little febrile excitement occurred. Since circumcision the child has recovered.

The cases cited only add to the many that have, doubtless, come to your notice through the medical periodicals, all or any of which furnish excellent grounds for studying the phenomena produced by what is termed the reflex action of the nervous system. They deserve particular attention, because they certainly open a new field for speculation at least, as to the cause of many obscure diseases, hitherto attributed to what ought to be regarded a purely physiological process, and not a pathological condition, teething. D. A. McClane Hamilton, in his article on Genital Irritation in the *American Journal of Medical Sciences*, says, "At one time and not so long ago, most of the reflex neuroses were thought to follow

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that medical scapegoat dentition, or else to depend upon intestinal irritation due to ascarides, or other parasites. We now have, I think, a new direction in which to turn, and in many instances we are rewarded for our efforts."

The cases given, having one predisposing and exciting cause, produce phenomena that by the commonly accepted nomenclature of diseases would be written, chorea, reflex paralysis and epilepsy, the treatment of neither of which have been fraught with much satisfaction to patients, nor have they heretofore reflected much credit upon the medical profession.

It is not my purpose to speak of the alteration of physiological function in these complaints, nor to consider their pathological condition. It would perhaps be out of place in what is intended to be a mere report of cases to do so, but careful study of the cases leads me to the conclusion that the neuroses were caused rather by the pain from the obstruction to the urinary passage, than by the production of venereal orgasm, as occurred in the ten cases reported by Dr. Sayre at the last meeting of the American Medical Association. Of his ten cases, eight were in boys with agglutinated glans and prepuce, and two in girls with elongated and inflamed clitoris. It has long since been known that urethral stricture occasionally causes reflex paralysis, as well as onanisms and venereal excesses cause that of epilepsy.

It is reasonable, therefore, to suppose that either separately or both connectedly, might have been factors in the production of the neuroses, in the few cases I have had the honor to read in your hearing.

In proof of this, I again quote so high authority as Dr. Hamilton, who reported four cases in which the evidence of sexual orgasm was wanting; and speaking of sensory impressions at the periphery, their transmissions and results, he says, "The irritation may be of two characters, either those of painful or of a purely sexual or agreeable nature, but both liable to be conveyed to the nerve centre, and do harm."

Dr. Worrel moved that the paper read by Dr. Matthews be

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received and placed with the others for final disposition. Carried.

Dr. Earle read the names of the committee on nominations, and the committee retired to agree upon its report.

Dr. N. S. Davis.—As I understand it, the report of the Committee on Diseases of Children, read this morning, and the report on Dietetics and Hygiene, and the paper of Dr. Matthews are before us for discussion.

Dr. Gray.—I move that the several papers read be referred to the Publication Committee, and I wish to add a word or two in relation to them. I take pleasure, Sir, in expressing my sincere gratification that these gentlemen have furnished us with such elaborate and able reports. I do not intend to discus them; but I am anxious that if it can be done in any way, they should have a wider circulation and a more general reading than they can have if buried in our volume of transactions. They ought to be sent out broadcast over this whole country. They contain information which the people ought to have. I was impressed during the reading of Dr. Hollister's paper, that he had attached less importance to the value of constant ventilation in its connection with the diseases of children, than was due to the subject; but I remember that he did allude to it frequently as being important. I only allude to it because my conviction is that bad ventilation is a very potent agency in the destruction of infantile life. In the tenement houses and hovels of the poor, and hardly less in the mansions of the rich, these little ones are entombed and bottled up in a foul atmosphere that very soon proves to be their destruction.

Dr. J. S. Jewell.—In regard to the last paper read concerning reflex troubles arising from irritation of the genital system, I have been impressed with one thing in reading the various reports, and some that have apparently not been noticed on this side of the water, especially by Sayre, in his works upon the subject, that there has not been enough pains taken to work out the mechanism by which these troubles come to pass. To make it clearly transparent would require drawings. But, I say, the time has now come when some more decided effort should be made to work out the mechanism through which they happen, and I think it could be done. As regards the first paper, there occurred to me a suggestion which was a little amusing, yet reported upon tolerably good authority, that in Pomerania they have come to that pass where they call for a male or female wet nurse, just as at an intelligence office we call for male or female help. It appears that in Pomerania, by a process of stimulating the mammary glands, both male and female, can be made to secrete milk. And it may be well enough, while considering this subject, to find out what the plan is in Pomerania, by which nurses are manufactured at pleasure.

Dr. E. Ingals.—There are one or two points in Dr. Hollister's paper

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in which I would not entirely agree with the conclusions that he reached. I am satisfied of this, that you do not need to wait until the infant is five months old to give starch food. I have been accustomed to advise starchy food early, and have found children to do extremely well on starchy food from the first. I know an infant now ten months old, that weighed 5½ pounds only, when it was first dressed, and that has never known anything but starchy food, and has grown well until this time. I have known many of these. I do not think as much of nurses as Dr. Hollister does. I would never want a nurse unless I owned the nurse. I want to suggest to Dr. Jewell (as he is following very minute things in his line; and when he talks about bringing this matter down to a very fine point), whether he cannot get these male wet nurses to have the babies also. [Laughter.]

A motion to refer all the reports to the Publishing Committee prevailed.

Dr. White.—I would make a motion that the Committee on Publication, if they approve Dr. Hollister's conclusions relating to dietetics and the management of children, be requested to publish it in a circular letter, that it may have a general distribution. I think it would fill the indication suggested in part by Dr. Gray, and would be very handy for me, and I presume for others, when we want to have some simple thing to give to the people, when they inquire as to the management of children—a circular of two or three pages; just that portion of the paper which relates to the general management of the child, would be very acceptable to people throughout the State.

Dr. Hollister.—I would like to amend that motion by a suggestion that a committee of three confer together, with reference to the preparation of such a paper, using such material as may occur to them. I do not think this report covers the ground, quite, that would need to be covered. I think it is essential that this instruction should be more general; and it seems to me that, perhaps a committee, consisting of three, might confer together, to make up a report for the publication of such a little leaf. It is well known that the Philadelphia Society of Obstetrics have published, within three or four years, something of the sort, covering such ground, and giving instruction in this way. It would seem that the members of this Society could distribute such a paper to great advantage. It occurs to me that a paper rightly prepared, would be very serviceable. But an important question comes as to the cost of its publication. I have an interest in the matter as Treasurer.

Dr. Ingals.—I think some things from Dr. Earle's report might be included in the circular. Both should be referred to the committee.

Dr. White accepted Dr. Hollister's amendment.

Dr. Gray.—I hope the committee will be authorized to make publica-

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tions in the newspapers. A great many papers would publish it, and it would be read in that way; and the cost would be a trifle compared with the object in view.

The motion of Dr. White, as amended by Dr. Hollister, prevailed.

Dr. Hamill.—What is the specific object of this committee? If I understand it rightly, there is something to be published, and as has been remarked, it may be published in the newspapers.

Dr. Hollister.—This same subject was under discussion at Champaign. As the result of that discussion, this committee was constituted. The discussion seems to express the same conviction, that by some means, it should find general circulation.

Dr. Hall nominated Drs. J. H. Hollister, E. Ingals and C. W. Earle as the committee of three.

Dr. H. N. Clarke.—The Chicago Medical Society has suspended one man for publishing a paper recommending treatment, which, while the treatment was not objected to, it was objected that his name was signed to the document giving instruction to his patients. Another member of this Society was censured in effect, for publishing a circular intended for his patients, giving them instruction in dietetics, etc. While this has been done, it occurred to me that perhaps there might be an objection to this motion, since it might be opening the door for the publication of circulars. For instance, it would hardly be supposed that one of the young members, like myself, would care about saying to inquiring patients, "I do not know; but I have a circular, which, if you will read it, will tell you all about it." I should have no objections, perhaps, to circulating such a paper as that; but I should want it to come directly from the Society, and, at the same time, leave to us the right of private judgment. Objection was made to-day to the use of medicines made up from popular formulas. Each one should decide what remedies were best adapted to the case. I think those who practice medicine ought to feel competent to give their own advice. If we fall back upon written advice in dietetics, I do not see why we may not in medicine.

The names nominated for the special committee were then confirmed.

Dr. J. L. Hayes, of Paris, Chairman of the Committee on Ophthalmology, read the report of the committee.

A motion to accept the report prevailed.

Dr. N. S. Davis moved that the paper be laid on the table until the remaining papers on this subject have been heard. The motion prevailed.

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Dr. John Wright read the following paper on "Diseases of the Rectum:"

SURGICAL DISEASES OF THE RECTUM.

Under the head of surgical diseases of the rectum, I propose to make a short report. I do not expect to present anything new, either on the pathology or treatment of this class of affections, or allude to all of them, but I will notice a few of them and only a few, more for the purpose of calling attention to some errors in diagnosis that are frequently met with in practice, rather than to attempt to present anything new or original. I will also try to show how the mistakes referred to are made, and how to avoid them.

In order to correctly diagnose rectal diseases, it is absolutely necessary to make ocular inspections of the rectum, aided in some cases by the use of the speculum.

Errors in diagnosis may happen and be unavoidable, with the most skillful physicians and surgeons, on account of the hidden locality or absence of manifestations of disease, as is the case in some affections of the brain, chest, abdominal and pelvic cavities. But diseases affecting the exterior of the body, as those of the eye, the ear, the mouth, the vagina and rectum, are not so difficult to diagnose, because, in addition to the history of the case, we can feel and touch the diseased structures. And in all such cases, errors in diagnosis should seldom, if ever, be seen in practice. This, however, is not the case in some of the diseases of the rectum. If we rely alone on the statements of our patients, and neglect to make ocular inspections, we will often make mistakes. Many of the leading symptons of hemorrhoids are also the symptons of fissure and fistula, and other affections of the rectum, and unless we are very careful in arriving at our conclusions we will be liable to mistake one of these affections for another. I have seen a few mistakes of this kind myself, two of which I will give a short account of, with the treatment and results.

A few years ago a lady, about thirty years of age, applied to me for treatment for hemorrhoids. She said she had been suffering for two or three years, and had been prescribed for by several physicians, but had received little, if any, benefit from

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treatment, and that for some months had remained at home nearly all of the time, on account of the pain she suffered from, when her bowels were evacuated. She said the pain was so great that she had to go to bed and remain there nearly all day. I believe she aimed to have her bowels move about once in two days. She had adopted that rule because the pain was great, and she put it off as long as she could. She said the pain came on as soon as the bowels were moved, and continued to increase in severity for several hours; that at times blood and mucus passed by the bowels, and that the pain was a burning or smarting kind of pain almost unendurable, and lasted nearly all day, confining her to her bed nearly one-third of the time.

This was the history of her case as she gave it to me. On enquiring of her I could not learn that there were any tumors externally, or that any came down when the bowels moved. I asked if she had ever been examined to determine what was the matter with her, and she said there had never been any examination. I told her that it would be necessary for me to make an examination, in order to determine what the disease was and how to treat it.

I proceeded to make an examination, after placing the patient in a proper position. There were no tumors to be seen externally, and on attempting to pass the finger into the rectum, the sphincter contracted with such force as to render its passage impracticable. But by gently drawing the edge of the bowel down, and at the same time encouraging the patient to relax the sphincter as much as possible and bear down gently, I was enabled to find at the edge of the anus, posterior portion, an ulcer, or fissure. When the parts were relaxed and lay flat, it was an ulcer, a little larger than a ten cent piece, but as the anus closed it became a fissure, or slit, in appearance. I proposed to operate by cutting across the ulcer, and the patient consented to have the operation performed. A few days afterwards, I performed the operation by making an incision across the ulcer, and immediately introduced my thumbs into the anus, and strained the muscle so that the wound made by the knife was almost completely on the outside from the relaxed state of the parts. In a few weeks this patient was well, the ulcer having entirely healed.

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Her general health was also much improved. In this case there had been no inspection of the rectum, and the diagnosis had evidently been made without due care, and based exclusively on the statements of the patient. Had there been an inspection of the parts, there would have been no mistake; for the diagnosis was readily made out without the use of the speculum or any other instrument. The mistake was the result of carelessness on the part of the physicians that diagnosed the case as one of piles.

Some time in June of last year, a gentleman called on me saying he wanted me to do something for him, said he was suffering from piles, that he had been a sufferer for several years; that he had been operated on several times, but not cured; was first operated on by a regular physician, a friend of mine who is a very good physician and surgeon, but from some cause the cure was not complete. In a few months after the first operation he visited a so-called regular pile doctor, a "specialist," a regular humbug, I suppose. The pile doctor pretended to remove a large number of tumors, but the patient did not see any of them. This operation also proved a failure, and the patient continued to suffer. For a year or two, he did nothing but use ointments, mostly patent nostrums. In May, a year ago, an infallible pile curer came to town, an itinerant, and the report went out that he cured piles without the use of the knife, ligature, or any other means known to the profession, a new treatment that was painless and never failed to cure. And by the persuasion of some of his friends, as he said, he was induced to report to the pile doctor for treatment. This was in May, and he continued to treat him until the fore-part of June, when he came into my hands. He had been getting worse from the time the pile doctor first prescribed for him. When he came to me he could not sit on a chair—had almost given up business. If his bowels were evacuated in the morning, he would have to go to bed and remain there nearly all day, in consequence of the extremely painful condition of the rectum, which would last nearly all day. His general health was very poor, he was gloomy and despondent. The local symptoms were very much the same as those of the lady of whom I have spoken. And an examination revealed a similiar condition; viz., a fissure. An

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operation was proposed and agreed to. On the 22d day of June, I operated in the presence of, and assisted by, Drs. T. K. Edmiston, Tyree and Waters. The patient being placed under the influence of sulphuric ether, and a Sims speculum introduced in to the rectum for the purpose of examining the condition of the bowel. No hemorrhoids were to be seen, but the mucous membrane was of a dark red color, as far up the bowel as could be seen. By means of the Sims speculum, which is the best speculum I ever used to examine the rectum, the ulcer was brought plainly into view. I made an incision across it, but not a very deep one. There was rather a free hemorrhage, on account of the congested condition of the mucous membrane. I introduced my thumbs and strained the muscle, as I did in the other case, so that the ulcer was partially external from the relaxation caused by straining the muscle with my thumbs. After the operation the patient remained in bed about a week, and then was permitted to get up. This operation did not prove a success, —the patient was benefited but not cured.

In about three weeks from that time, I examined the patient again, and found the ulcer had not entirely healed, but the mucous membrane was in a much more healthy condition. I repeated the operation, making a deeper incision, and strained the muscle as before with my thumbs. This double operation may appear to have been unnecessary, but it placed the parts completely at rest.

In a few days, this patient was up and well in a short time, though I never had an opportunity to examine the bowel again; but, judging from what he said and from his general appearance, I think the fissure was cured.

Shortly after I saw this case another patient applied to me for treatment for hemorrhoids. The symptoms in his case as given to me, were nearly the same as in the cases I have described; and I was almost ready to make up my mind that I had another case of fissure. But when I came to examine the rectum, I found a complete fistula, both openings being very low down, and giving rise to the burning or smarting pain that is so common in fissure.

This man too had been using all of the pile ointments that he could hear of, and of course without deriving any benefit from

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them. Of course the remedy in this kind of a case is the knife.

Hemorrhoids is the disease that is most frequently met with of all other diseases of the rectum. This affection is not confined to any one class of persons or occupations, but all are liable to be affected, and a great many do suffer more or less from piles. And I suppose that is the reason why fissure, fistula, and so many other affections are so often mistaken for hemorrhoids, and especially by those who neglect to carefully inspect the rectum before making out their diagnosis. To arrive at a conclusion that a patient has piles, without an inspection of the rectum, is arriving at a conclusion by guessing at it, a practice that is never justifiable.

I do not pretend to say that mistakes are made in the practice of all physicians or surgeons. Those who devote their time exclusively to surgery, and those connected with colleges and hospitals, seldom if ever make such mistakes. But they are apt to happen to the general practitioner, and especially to those in small towns and in the country, where surgery, as it is in some localities, is almost entirely neglected, or where all surgical cases are sent off to large cities to have operations performed, unless an intinerant comes that does all the work for them.

While it is a fact, that hemorrhoids is by far the most frequent of all affections of the rectum, and the symptoms so nearly the same in all cases that it would appear to be almost impossible to make mistakes, yet I am well satisfied that if we rely alone on the statements of our patients, who suppose they are suffering from piles, to make up our diagnosis, we will often arrive at erroneous conclusions. A few years ago, an intelligent old lady called on me for a prescription for what she said was piles. She said when her bowels were moved that she had pain, passed some blood and mucus, and suffered more or less all the time with her hips and back, and had a feeling of weight about the rectum. I learned that she had also a vaginal discharge, which made me suspect that her disease was not hemorrhoids. I made an examination and did not find piles, but I found cancer of the cervix uteri. Whether this case had ever been diagnosed hemorrhoids by a physician or not I do not know, but I do know her description of her case was very much the same as is ordinarily given by persons who are suffering from piles, with the excep-

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tion of the vaginal discharge. And I have no doubt, if it had not been for that, and a prescription had been made without an examination, it would have been made for hemorrhoids. Equally as great mistakes were made in the cases of fissure that I have attended to, and also in the case of fistula that I have reported. These cases had all been declared to be cases of piles, and had been treated as such, and yet not one of them were suffering from that affection. The diagnosis was erroneous, and was arrived at without due care, the mere statements of the patients alone being relied on as sufficient to make out the diagnosis. This is the only way in which such mistakes could have been made, and, as a rule, is the way in which they are made. I therefore repeat the statement that in order to correctly diagnose rectal diseases, such as have been alluded to in this report, it is absolutely necessary to make ocular inspections of the rectum, aided, in some cases, by the use of the speculum.

JOHN WRIGHT, M. D.

CLINTON, Ill., May 16th, 1877.

A motion to receive the report was carried.

Dr. J. L. White, of Bloomington, presented a case sent to the Secretary of the Society by Dr. Corr, of Carlinville, and which had been referred to the Committee on Surgery. The committee had decided to make a simple statement of the case, and not take up the time of the Society by reading it in full. The report, said Dr. White, presents two or three medico-legal questions of considerable importance. Dr. Corr was called to a family, and, upon arriving at the house, found lying upon the floor the members of the household, consisting of a man, his wife and child. The man was dead, the child dead, and the woman in an insensible condition, and covered all over the head and face with bruises, evidently made by a gun-barrel found lying upon the floor. The man had several gashes upon his throat. Upon the left side the jugular vein and the carotid artery were severed. The child's skull was fractured. The supposition, in the first place, was, that the man had made an assault upon the woman and child, and supposing he had murdered both, had afterward committed suicide. The wounds

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were such as could have been made by himself. After a few days the woman returned to consciousness. I should have said that the man was found partly dressed; the woman was also dressed. She said, on coming to consciousness, a few days afterwards, that they were attacked by an outside party, and that this crime was not committed by the husband. She also persisted in stating that she knew nothing from the time she undressed and retired for the night, until her return to consciousness, some days after the occurrence of the crime. There were some suspicions, in consequence of this story, that she herself might have been the perpetrator of the crime, and consequently she was arrested.

The President.—I understand it is the duty of the committee to make some recommendation concerning the paper.

Dr. White.—The report is sent simply to gain an expression of opinion.

Dr. Davis.—Does the committee regard it as proper for publication in the Transactions?

Dr White.—They do not.

Dr. Davis.—I move that the report be received and laid upon the table.

Dr. J. S. Jewell.—I only wish to mention one point in regard to memory. There are numerous cases, and some quite remarkable, of loss of memory—one that I will mention. A clergyman had an attack of apoplexy, so-called; became unconscious, and remained so for several hours. When he recovered, he was found to have lost completely his memory of everything that had happened to him for a period dating back exactly four years. Everything pertaining to his life during that time was obliterated. There are a great many cases which go to show that under certain conditions, one may go on performing numerous acts and have no remembrance of them afterwards.

The motion to lay the subject on the table was adopted.

Dr. Edmund Andrews next read a paper on the treatment by pressure of chronic inflammation of the ankle joint. The paper is as follows:

EXTENSION BY PRESSURE IN CHRONIC INFLAMMATION OF THE ANKLE JOINT.

BY EDMUND ANDREWS, A. M., M. D.
(Professor of Principles and Practice of Surgery in Chicago Medical College.)

Extension of the ankle joint for chronic inflammation is embarassed by two difficulties:

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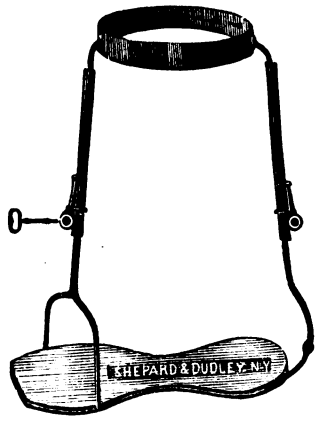
1. The shortness and peculiar form of the foot renders it difficult to apply adhesive plasters satisfactorily.

2. The ordinary apparatus surrounds the member with machinery, which is complex and cumbersome.

The instrument most commonly used is that of Sayre, which is here represented, made by Shepard & Dudley, of New York.



Sayre's brace obtains counter extension by a steel ring surrounding the calf of the leg, and attached to it by numerous strips of adhesive plaster. From this ring two rack and pinion bars extend downward to a wooden or metalic sole. The foot is strapped to the sole by adhesive plasters, and extension is made by a key, which turns the pinion and pushes down the rack-bar. When skillfully used this apparatus makes effectual extension, but it is tedious and difficult of application, encumbers the limb unpleasantly, and, being complex, cannot well be made for less than fifteen dollars.

For several years I have been using and gradually perfecting a simpler splint, which works so satisfactorily that I have abandoned Sayre's instrument altogether, and feel justified in proposing the new one as an efficient substitute.

The following cut gives a correct idea of its form.

If we study the inferior extremity, we see that the lower half of the leg is the frustrum of a cone whose apex is at the ankle. Now if a well fitted casing of leather, or other material, be laced firmly upon this cone it will tend slowly but forcibly to slide downward against the foot.

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In a similar manner the top of the foot is another cone, whose apex is upward, and any well fiitted casing laced firmly upon it forces the cone of the foot strongly downward. It is evident,

therefore, that if we construct a lacer of leather, or other material well fitted to both these cones, it will tend forcibly to push them asunder, and thus make the required extension at the ankle. To this end a plaster cast should be taken of the foot and leg, with the foot hanging free and the toes pointing somewhat downward. Experience has shown me that this sloping position is important, as the brace never works as well if the foot is at right angles with the leg. The malleoli of the cast should then be built out a little by applying plaster of Paris upon them, so that they may mould out the leather and prevent it from pressing painfully upon the bones. A piece of wet russet harness leather is then wrapped around the cast in such a way as to lap over its own border in front, and is crimped to a perfect fit by winding a stout cord over the whole of it. When dried it will fit the cones of the foot and leg perfectly. The over-lapping border is then eyletted, and an eyletted strip of leather sewn on opposite to it, so as to allow of lacing up. Finally a lining of chamois skin is inserted, and the apparatus is complete. It works admirably. There are no screws, racks, joints or pinions, nor even adhesive straps. It can be put on or off in a moment by simply lacing or unlacing the string. It keeps up a gentle and desirable pressure on the swollen joints; it maintains immobility; it fits the limb like wax, and pushes the foot downward so as to make an effectual extension of the

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ankle joint, so that its efficiency in removing the inflammation seems to me to be far superior to that of the instruments formerly employed. Morever, the surgeon can, in an emergency, construct an extemporaneous form of it, without the help of any instrument maker. For this purpose, he should first apply the ordinary dextrine splint of starch pasteboard and bandages, leaving in front a strip two inches wide, in which there is only bandage, but no paste or pasteboard. When dry this strip may be cut, and then if an elastic bandage be wound over the whole there will be a double-cone-extension effected, the same in principle, and nearly equal in efficiency to that produced by the leather instrument.

A motion to receive and refer the paper to the Publishing Committee prevailed.

Dr. Birney.—I move that the report of Dr. Wright be referred to the Committee on Publication. Carried.

Dr. E. L. Holmes read his report on Foreign Bodies in the Globe of the Eye, as follows:

FOREIGN BODIES IN THE GLOBE.

BY DR. E. L. HOLMES, OF CHICAGO.

There are possibly no injuries of the eye, which should interest the general practitioner more than those caused by the presence of foreign substances within the globe. No class of injuries, apparently so trifling, is so frequently followed by direful results as this. It is quite certain, intelligent physicians and surgeons usually comprehend theoretically the full gravity of such injuries—and yet, in actual practice, too often vacillate and fail to apply their knowledge correctly.

The relation of any general practitioner, in such cases, with the patient and his friends, is often most embarrassing. On the one hand, the patient and friends frequently express positive belief that no foreign body is in the eye; on the other, the surgeon himself is somewhat doubtful regarding the diagnosis. Patients will not be convinced that anything is in the eye, since "they do not feel it." When the pain is most intense it is ascribed to neuralgia. It is often the difficulty in over-

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coming this pain, and its long continuance in spite of treatment, that finally brings the patient to the specialist.

In a large number of cases, also, the specialist experiences the same embarrassment in convincing patients that a foreign body is in the globe. They delay, day after day, to accept the proper surgical treatment until they are forced to it by excruciating pain, or threatened loss of the remaining eye.

The diagnosis in nearly all cases, where the history is reasonably complete, is certain.

Where a very *minute* fragment of metal, or other hard substance, has been thrown with sufficient force to puncture the walls of the eye, there is scarcely an exception to the rule that it has passed entirely through and lies in some of the intraocular contents. This is an important rule, and one which will seldom mislead the practitioner, even when, on account of cataract or closure of the pupil, no satisfactory examination with the ophthalmoscope can be made. I have never failed, but in a single instance, to find a foreign body in an extirpated globe, where I had suspected its presence. In this exceptional case, the metal may have been so minute and so imbedded in the products of inflammation as to escape detection. In two cases, which I have observed, and of which I have the specimens, the piece of metal was literally no larger than a small grain of sand, and could be found only after the most careful washing in clear water. The specimens serve as excellent examples to illustrate to students how grave changes in the intraocular tissues may be produced by injuries, which seem at first glance most trivial.

There is a more doubtful diagnosis of a foreign body in the globe, when the wound is extensive. Such a wound may be produced by a large object flying with sufficient force to make an incised wound and then rebound. Punctures of the sclerotic or cornea by splinters of wood, covered with sand or other material, may be complicated by minute particles of foreign bodies being carried into the globe. Doubt must often exist, where punctures of the globe have occurred to children falling on stubble or rusty nails.

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Small but very heavy substances, like shot, may pass with sufficient force not only to enter the globe but also to pass out at the opposite side. Unless the refractory media are clear, and the wounds or wound are favorably situated, the ophthalmoscope must fail to remove doubt as to the presence of such a body in the globe.

The continued presence of a foreign body in the globe is absolutely certain to injure vision, and in almost all cases to produce destruction of the intraocular contents.

I am personally aware of but two classes of such cases in which the retina, vitrioris and choroid may remain almost indefinitely intact. I have observed three cases in which an exceedingly minute fragment of steel passed through the cornea and iris into the lens. Without the slightest pain or symptom of inflammation, traumatic cataract was formed, the steel being discovered only after dilatation of the pupil. In one of these cases I extracted the hard cataractous lens, two years after the accident, by Græfe's operation, with a most excellent result.

I have also seen two cases in which grains of powder had been thrown into the anterior chamber without causing continued inflammatory action. The lens became opaque, a spot on the iris remaining discolored by the presence of carbon. In other respects the iris remained normal.

It is remarkable in exceptional cases, how long a foreign body will remain in the globe without disturbance, and how long the choroid and iris, among the most vulnerable portions of the eye, will tolerate the presence of particles of metal.

Some time since a mechanic, while shipping iron received a slight wound of the eye. He applied to me for advice the following day. There was no dimness of sight, no pain and no trace of injury of the cornea nor iris, as far as I could discover with the unaided eye, or a strong magnifying glass. The history of the case gave presumptive evidence that a piece of metal was in the eye. A year after this the patient returned with the statement, that his vision, which had been perfect till within a few weeks, had slowly failed; there had been no pain

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nor other symptom of inflammation. By simple inspection a well marked opacity of the lens could be observed. The iris and pupil seemed perfectly normal. Precisely a year after this, on the same day of the month, the patient reappeared with the conjunctiva red, iris discolored, pupil slightly *dilated* and irregular. These symptoms with great pain had continued nearly a week. The unaided eye could not detect a minute brown elevation which was most certainly a particle of rusted steel, extending into the anterior chamber from near the periphery of the iris. The patient declined all surgical treatment.

In another case, a piece of percussion cap had remained in the substance of the iris nearly eight years, during which several long attacks of pain and inflammation occurred without injury to the sight. Finally the metal could be perceived projecting from the surface of the iris and removed by iridictomy.

A young man, while waiting at a drug store for a prescription, received a small cubical fragment of steel from the edge of a chisel in the hands of a clerk, some feet distant, opening a case of goods. Neither the patient, nor his family appreciated the gravity of the accident, for on reaching home, there was no pain nor trace of the injury observed by his friends. The patient is confident he could see perfectly well for months, when vision became partially impaired. Thirteen months after the accident, the eye began to suffer violent pain, which his family physician was unable to alleviate, when my opinion was sought. The extirpation of the globe revealed the metal in the choroid at a point equidistant from the border of the cornea and optic nerve.

The changes in the globe, which result from this accident vary according to circumstances, which are not well understood. In some cases there is most extensive and early suppuration in nearly all the tissue. In others there is a chronic choroido-irido-clyclitis with effusion between the choroid and retina, crowding the latter into the central portion of the globe.

In other cases, the tissues undergo atrophy, the globe becoming very small, the choroid showing calcarious degeneration

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The treatment which is imperatively demanded in these cases is, 1st. The removal of the foreign body, if possible. 2d. As soon as it is determined that vision is totally destroyed—the extirpation of the globe.

For reasons above given, the presence of a minute foreign body in the lens or grains of powder in the anterior chamber, may form exceptions to this rule.

The removal of a foreign body in or on the iris, should be accomplished in nearly all cases by excising the portion of the iris implicated as in iridectomy. If the foreign body is lying loose in the anterior chamber—a very rare accident according to my experience—it may be removed through an incision in the cornea; if the iris is injured by the operation it may be wise to perform iridectomy on the injured portion.

The removal of a foreign body from the vitreous humor, is usually accomplished with very great difficulty, even where there is little hemorrhage, and the body can be readily seen by means of the ophthalmoscope. Not only great skill and delicacy, but also great good fortune are necessary to ensure a good result.

Foreign bodies in the globe are one of the most prolific sources of sympathetic inflammation of the previously sound eye, which is almost invariably followed by serious, if not total loss of vision.

The report was accepted and a motion made to refer it to the Committee on Publication.

Dr. S. J. Jones—observed that in the paper just read, it was stated that foreign bodies in the globe of the eye were a frequent cause of chronic conjuctivitis. He supposed that chronic choroiditis was meant, instead of conjunctivitis. He observed, also, that the plan of treatment advised, removal of the eye-ball, when the foreign body had entered the globe, *and remained in it*, is the rule of safety for the patient, but that it is not invariably the rule of safety for the surgeon. The patient, and the friends of the patient, do not always see the importance of such prompt action. Whilst the patient is suffering pain, he may readily consent to the removal of the globe, but after rapid recovery from the operation, and realizing the inconvenience of the loss of the eyeball, he often believes that the surgeon "jumped at a conclusion," and unnecessarily sacrificed the eye. In this opnion, he thinks he is confirmed by the experience of others, who have refused to submit to such removal, when advised, and

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who, for years succeeding the injury, had no inconvenience beyond that which resulted at the time of the accident, for neither party realizes the danger there is to the uninjured eye, from sympathetic inflammation, in case of further accident, however slight, to the uninjured eye. The dissatisfaction here expressed is akin to that of the man, who, when blind from cataract, thought he would be perfectly satisfied if only relief enough could be given him that he might grope his way unaided, but who, after an operation, can see to read with ease, and the improvement is so great that he wishes that it was only a little better, that the eye might have retained the power of accommodation, and be as good as the other one.

Thus it is necessary that the surgeon, in safety to himself, make sure that the patient be fully aware of the gravity of the case, *and be given time enough to realize its importance*, to guard against subsequent dissatisfaction, otherwise, the surgeon may be seriously annoyed by a suit for malpractice, through misapprehension of the fact by the patient, or through persuasion of his friends, who cite other cases, where eyes were similarly injured, as they suppose, and they were spared the deformity incident to the removal of the eye-ball, since, in some cases, the foreign body may lie dormant in the eye, for a longer or shorter time; in some cases become ensheathed, and not give rise to the violent symptoms so common in these injuries.

The paper was referred to the Committee on Publication.

Dr. Davis.—I move that the report read by Dr. J. L. Hayes, on ophthalmology, be taken from the table and referred, with the rest, to the Committee on Publication.

The motion of Dr. Davis prevailed.

A volunteer paper on diseases of the middle ear, was read by Dr. Ritchey, as follows:

INFLAMMATION OF THE MIDDLE EAR, FOLLOWING INFLAMMATION OF THE NARES AND PHARYNX.

It is generally believed that affections of the middle ear commonly proceed from the throat through the eustachian tubes by continuity of tissue; the mucous membrane which lines the middle ear, being the same as that which covers the pharynx and air passage, is the part affected.

Acute inflammation of the middle ear is one of the most common of the sequelæ of the exanthematous fevers; it occurs, also, during an acute attack of coryza in the absence of these fevers.

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Chronic granular pharyngitis usually precedes chronic non-suppurative inflammation of the middle ear, as it may acute inflammation of the same part. So frequently does this happen, that the pharyngitis is looked upon as an almost constant attendant upon this affection. There are cases, however, which have no history of pharyngitis.

Chronic pharyngitis, or "Clergyman's Sorethroat," as it is commonly designated, results,from some irritation to the membrane covering the pharynx, but what the cause has been in each case, it is sometimes difficult to determine. Among its active sources have been named causes disturbing the circulation, as cold, wet feet, exposure to acrid fumes, public speaking, and the irritation of tobacco smoke. These may be the immediate causes, but they do not seem to be the *predisposing* cause; for those suffer who are not exposed to any of these except, perhaps, to cold wet feet, causing a local determination of blood.

Professor Cohen in his work on "Diseases of the throat," and in this connection, says: "The causes of this affection are not thoroughly understood. It makes its appearance in individuals of all classes, without distinction of temperament, social position, or employment. It probably *never* occurs as a direct result of acute inflammation of the pharynx, though it is easy to understand how repeated attacks of sore throat of an acute or subacute character would gradually bring about the condition under consideration. * * * * * It is highly probable that in the majority of instances, the cases are of a *chronic* character from beginning to end."

Again, he remarks: "The reason of its prevalence among clergymen is, at least in part, due to the *inequalities of temperature*, under which they are often compelled to preach, * * * using the organs of the throat in addressing their auditors, and thus exposing these parts also to the influence of the *cold air*, *which has not been warmed by previous passage through the nostrils.*"

Just here, I think he has struck the key-note of the difficulty, "The influence of cold air which has not been warmed by

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previous passage through the nostrils," and this will account not only for the existence of the affection in clergyman, but also for "Its appearance in individuals of all classes without distinction of temperament, social position or employment," and we may truthfully add, *or of sex.*

In climates where the variations of temperature are not so great as in this latitude, the affection is less frequent, and there clergymen, as well as others, suffer less from it. Public speaking, under the same circumstances, of course, aggravates the trouble, for the exciting cause acts more violently in these than in other cases, and hence the name of "Clergyman's Sore Throat."

Does the affection begin in the throat? Not always. It is probable that the inflammation is propagated from the nares to the pharynx, as it is from the pharynx to the middle ears, and to the larynx.

All air in the natural process of breathing, should pass to and from the lungs through the nostrils, have its temperature modified by contact with the mucous membrane lining them, and be thus fitted for its reception by the lungs. During winter in this climate, the season of "colds," people live in heated rooms breathing dry air at a temperature of 70 to 80 deg. F. They pass immediately from these rooms into the open air at zero, or even below. This sudden transition causes both an increase and a diminution in the amount of secretion, so, at one time, there may be a dry, parched condition of the mucous membrane, and at another time, the secretion may be more than merely enough to moisten and protect the parts, and we have a catarrh, or coryza.

By their position, anatomically, and by their function, these passages are much exposed to vicissitudes of temperature which have a tendency to destroy the equilibrium of the circulation. The mucous membrane is very sensitive, being well supplied with small twigs of nerves; it is quite vascular, though the individual vessels are small, and hence it is easily affected by such influences. The irritation acts constantly for a great part of the year, upon every one, thus accounting for

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the prevalence of the conditions which result from it. The mucous membrane being so impressible, we have not only one attack of coryza, but many of them. If it happened only once, the parts would recover their normal condition and the injury would be slight; but instead of this, perhaps for the whole year the membrane has not once secreted normally.

After the effusion of very fluid secretion, its nature changes. Losing its watery element, it gradually becomes thick, dry and adherent to the mucous membrane. Instead of protecting, by covering the whole surface, it clings only to portions of the mucous membrane, and itself becomes a source of irritation and of subsequent ulceration. Now, the keen air, passing through the nostrils, over the unprotected mucous membrane, produces by its constant stimulation, a passive congestion of the membrane, which becomes thickened and hypertrophied, and causes the "stuffy feeling" so often described. This "stuffiness" exists also in the acute attacks, but is only of temporary inconvenience.

At this stage, the nasal mucous membrane is red, hot, dry, sensitive, and glistening, and it bleeds with the least, and often without any noticeable provocation. This condition usually extends directly to the posterior nares and the nasopharyngeal space, producing follicular pharyngitis and nasal polypi. The passage of air through the nostrils is difficult and often painful, and, in order to breathe freely, the mouth is opened, and the cold air inhaled through it is thus brought in direct contact with portions of the air passages not prepared for it at such temperature, and produces the same effect as in the nostrils. Many cases of pharyngitis, laryngitis and bronchitis are possibly due to this influence. They must be chronic in their nature, for the cause acts, not violently, but continuously.

A state of things differing from this, may be ascribed to the same source: that in which the mucous membrane becomes almost cicatricial, or fibrous in its nature, clinging closely to the bony walls, and having little vascularity or sensitiveness. It is dry, as in the other instance, but neither red nor hot. The nares are generally large, admitting readily

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the passage of the air, which moving over the cold surface, is brought into immediate contact with the naso-pharyngeal membrane, and produces chronic pharyngitis, if this does not already exist, from extension of the inflammation. This, probably is only a late stage of the trouble first described, differing more from the normal condition, the tissue seeming to have degenerated.

There is an intermediate stage, in which the mucous membrane is dry and sensitive, the epidermis degenerates, and much pruritus is present.

Each of these stages is usually associated with a particular condition of the middle ear and eustachian tubes. In the first stage, the naso-pharyngeal mucous membrane secretes freely a thick mucus, which flows down and touches the soft palate, causing hawking and spitting, by the irritation of its presence, while its consistency makes its removal difficult.

The hawking is done chiefly in the morning, when the patient assumes the upright position, as the secretion collects in considerable quantity during the night. This irritation continues during the whole progress of the disease.

Often there is some tubal catarrh with this pharyngeal inflammation, and these together, form a starting point for an acute inflammation of the middle ear, which may be precipitated by any of the exciting causes, those which create an undue tendency of blood to the parts, accompanied by pain and fever, this acute aggravation may go on to suppuration, if not seen early and treated promptly, and may result in perforation of the membrana tympani; or worse, in mastoid abscess, followed by caries of the temporal bone and aural polypi, or even in death by cerebritis or pyæmia.

In the absence of acute inflammation, the nostrils may be dry and irritable, the same condition extending to the naso-pharyngeal membranes, with frequent attacks of slight pain in the ears, some tinnitus, and injection of the blood vessels of the membrane of the drum. The external meatus of the ear becomes dry, hot and diminished by reason of the engorged condition of the vessels of the soft tissues lining it. No cer-

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umen is secreted, the epidermis scales off, and the meatus itches, just as do the nares at this stage. Thus the subacute inflammation is propagated from the nares to the naso-pharyngeal space, thence, through eustachian tubes, to the middle ear and membrana tympani, implicating indirectly the external meatus.

By a continuance of this action, all the tissues become changed; mucous membrane ceases entirely to secrete, loses much of its vitality, and, where it covers bony walls, simulates periostum, considerably. The eustachian tubes may be open, but they are diminished and dry; the ossicles of the middle ear are often rendered motionless at their articulations by concretions of mucus formed there during the acute or subacute stage, and the membrani tympani becomes opaque unnaturally concave, and sometimes immovable from adhesions within the tympanum, producing marked impairment of hearing.

When the case has reached this stage a collection of cerumen may be found in the external meatus, differing in color and degree of hardness with the length of time it has remained there. If the case be one that has lasted for some time, and the cerumen is very hard, the meatus will probably be inflamed by its presence, as by that of any other foreign body, and the degree of inflammation will depend somewhat upon the hardness of the wax.

It is not claimed that the violent changes in the temperature of the air inhaled is the only cause of the affections named, but that it is one which acts constantly and efficiently. It is powerful in preparing the way for what follows, and the exciting causes would probably result in no permanent injury, if it were not for this predisposition. Of course, scarlet fever, measles, diphtheria and other fevers, which are propagated by infection, are not included in this consideration.

In the earlier stages, often there is nothing to direct attention to the middle ear as implicated in the trouble, unless there be present acute inflammation. Although pain may accompany subacute and chronic inflammation of the middle

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ear, it is rarely so severe as to give much annoyance, and little is thought of it by even the patient, until the hearing is impaired, or he is tortured with tinnitus. He will usually quiet any fears he may have before this time, by the thought that he has "catarrh," for which he believes there is no relief. Actual inspection will generally show an altered appearance of the membrana tympani, pointing directly to the affection of the ear.

If the inflammation be subacute the membrana tympani will be congested, a leash of large vessels may extend along the handle of the malleus, quite to the centre of the membrane, while smaller vessels may reach toward the centre of the membrana tympani from all parts of its circumference. If several attacks have occurred, the membrane of the drum may appear of a uniformly dull red color, without distinct vessels.

In the chronic form of inflammation the membrane of the drum will have lost its lustre, and will be less translucent. Especially is this the case with children, in whom the disease has not progressed so far as to cause impairment of hearing, but who have had occasional "earache."

Later when the chronic inflammation has lasted for several years, the hearing power will have become gradually less, and the patient will have to be very attentive to hear what may be said to him ; if a child, it will become inattentive, apparently. The membrane of the drum now, may appear milk-blue in color, or white, thickened, and opaque, with its external concavity increased so much that the membrane seems almost to be wrapped about the ossicles of the middle ear, as the wind wraps the sails about the masts of a vessel. The cone of light, because of the variation in the shape and texture of the membrana tympani, may have disappeared either partially or entirely, or may be changed only in position on account of the change in its external concavity. On the appearance of the membrana tympani we thus have an index of what may be taking place within the middle ear.

Chronic catarrhal inflammation, which is most likely to follow the same affection of the nasal passages and pharynx, is

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very insidious, and much to be dreaded, for though it may proceed slowly, yet, sooner or later, it will commonly be the result of the diseases of the nares and pharynx, and then unless properly treated, in time, will end in progressive impairment of the hearing.

What may be done to prevent these ill results ?

Protect the nasal mucous membrane, that the air breathed may pass through its natural channels to the lungs.

If the mode of living could be changed in such a way as to modify the variation of temperature to which we are continually exposed, one cause would be removed, and the trouble in a great measure prevented. I know of no means by which this is possible, and as the acting cause cannot be removed, we must guard against its consequences, or, when the affection already exists, do what we can to relieve it. In view of this, it will be necessary to avoid as far as possible any exposure which may cause a determination of blood to this locality, by sufficient clothing, especially to the feet, keeping them dry and warm. We may then attend to the topical application, which may be soothing or stimulating, as the stage of the case requires.

In the early stages we should treat the local congestion by the usual means, unstimulating astringents and general derivatives. Astringents, even, are not always necessary for the same result may be obtained simply by affording protection to the mucous membrane against the stimulating action of the air, by a substitute for its natural secretion, and thus *permitting* the parts to resume their healthy condition. The turgescence of the vessels will diminish, the parts will become less sensative, a normal secretion will take place, the "stuffy feeling" will pass off, and the patient will breathe through his nostrils and keep his lips closed.

I have seen a number of cases, chiefly females, in whom epistaxis had been an almost daily occurrence for years, relieved of their annoyance in this way. In these instances the bleeding could not be attributed to vicarious menstruation.

Among them was a woman, aged about 25 years, who came

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to the Illinois Charitable Eye and Ear Infirmary, in this city, with catarrhal inflammation of the middle ears, which slightly impaired her power of hearing. The nasal mucous membrane was thickened, dry, and unusually red. She was anemic, and had a very delicate skin. Hemorrhage followed the use of the eustachian catheter, an unusual thing except in these cases, and those in which ulceration is present. She stated that she had been annoyed with nasal hemorrhage nearly every day for three years, that her nose felt sore all the time, and, to use her own language, "If this could be cured, I would be more than half well."

Discontinuing the use of the eustachian catheter, vasoline was prescribed to be applied upon the nasal mucous membrane, twice a day. As a result the nose is no longer sore, and the catheter is used every day without hemorrhage attending it.

The membrane has diminished in thickness, and the nasal passages are larger in consequence. A month has elapsed between the attacks of bleeding, and even when they occur, the amount of blood lost is small. Her general health has improved under tonics.

In conjunction with the treatment already indicated, inhalations of chlorate of potash and glycerine may be given with decided advantage, as the vapor exercises a soothing influence upon the whole membrane of the air passages. The heat and moisture of the inhalations clear off the secretions, while the chlorate of potash affects the mucous membrane here as elsewhere.

In cases where the irritability takes the form of itching, the scales of epidermis collect, and the lining membrane is dry, a combination of the subnitrate of bismuth, with vasoline (ʒi to ℥i) forms an ointment, which acts better than vasoline alone in relieving the pruritus, and in removing the products of the desquamation.

In those cases in which the mucous membrane has become almost fibrous in its nature, very little vascularity remains, and to restore it the parts must be subjected to moderate and

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repeated stimulation, just as in any other chronic inflammation. A very good method of stimulation is by means of air impressed with iodine, as thus the medication reaches all of that irregular surface, and does not, as would be the case with liquids, settle in the depressions, and unduly stimulate them while other parts would escape entirely.

When the circulation has been restored and repair begins, it is well to substitute, as before, something for the mucus which is yet lacking.

On motion, the paper was accepted and referred to the Publication Committee.

Dr. N. S. Davis.—Dr. Jones has two or three short papers. There is not time to hear them now. I move that they be heard to-morrow at half past ten o'clock, following Dr. Jewell's paper.

The motion prevailed, and the Society adjourned until 9 o'clock Thursday morning.

THURSDAY MORNING.

The Association was called to order by the President at 9 o'clock, and the Assistant Secretary, Dr. Earle, submitted the names of Dr. Herrotin, of Chicago, and Dr. J. T. Everett, of Sterling, Lee County, as proposed members. Referred to the Board of Censors.

Prof. J. Adams Allen submitted, on behalf of the Committee on Necrology, the following report in regard to the late Dr. J. W. Freer.

OBITUARY.

Joseph Warren Freer, M. D., President and Professor of Physiology and Microscopic Anatomy, in Rush Medical College, died, at his residence in Chicago, April 12th, 1877.

He was born at Fort Ann, Washington Co., N. Y., on the 10th of July, 1816.

His father, Elias Freer, was of Hollandish descent, the ancestry being among the early Dutch settlers on the Hudson. His mother was of the Paine family—early settlers of New England. Both families have numerous representatives in the West, including many well-known and estimable citizens. His educational advantages were those of the common school,

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until fifteen years of age, after which he attended for two years what was then termed a High School. At eighteen he entered the office of Dr. Lemuel C. Paine, then of Clyde, N. Y., as a pupil of medicine, and, in order to pay his way, attended the doctor's small drug store. During this period, he took a course of three months instructions in the French language, but the teaching being furnished by a New England lady, he afterwards found that he had scarcely become *au fait* in pronunciation.

In his nineteenth year, June 14th, 1836, he came to Chicago, where for a few weeks he was employed as a clerk in a dry goods store; then being seized with the prevailing anxiety to acquire land, he invested in a "mud claim" on Calumet river, about four miles from any neighbors, except Pottawatomie Indians. He remained there about two months, and, in the meantime, nearly died of filth, bad food, and ultimate sickness. During the latter he became unconscious, and in this condition he was carried back to Chicago, and received into the residence of Mr. John Dye, then standing on the corner of State and Clark streets. In the fall of the same year, his parents having immigrated West, he concluded to follow their fortunes. They settled on "claim land," at a place called Forked Creek, near Wilmington, Ill. There he remained until July 4th, 1846. During this time he formed several valuable acquaintances, particularly Hon. Richard L. Wilson, formerly editor of the Chicago *Evening Journal*, and Dr. Hiram Todd, to the latter of whom he was ever grateful for valuable advice, and the use of his excellent literary and scientific library. In later years he often spoke of Dr. Todd in affectionate terms, characterizing him as "a gentleman of the old school, of liberal education and culture."

Aside from incidental advantages of this sort, he had little opportunity to educate himself, for with the earlier settlers the material man demanded more than the moral or mental. Nevertheless, he did burn some midnight oil over a little Dublin Dissector, an ancient work on chemistry and sundry literary works, borrowed from his cherished friend, Dr. Todd.

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While sojourning in this region, he opened, and brought under cultivation, three farms, on one of which he made his home after his first marriage. This is now one of the finest farms in the Kankakee valley. There are trees on it, of his own planting, now nearly two feet in diameter.

In March, 1844, he married Emeline, daughter of Phineas Holden, Esq., of Hickory Creek, Will Co. One child, Henry C., was the fruit of this union. He is now living, and won honor as a soldier in the late war. Mrs. Freer died in the autumn of 1845—a little less than two years from their marriage.

This bereavement changed the whole course of his subsequent life. It happened that he was dissatisfied with the medical treatment of her last sickness, and expressed a determination to know whether there was any truth in, and reliance to be placed upon medicine. In furtherance of this purpose, mounting a load of wheat, that he might not lose any time, he drove to the then *village* of Chicago, to solicit Prof. Daniel Brainard to receive him into his office. By a singular coincidence, he was met at the door by Ephraim Ingals, then a student, and afterwards for a number of years his colleague in Rush Medical College. It is sufficient here to say, that then commenced a friendship which continued throughout Prof. Freer's life, and was feelingly, as well as eloquently, commemorated by the survivor at the funeral exercises.

Notwithstanding the somewhat rustic appearance of the applicant, Dr. Brainard gave him a hearty welcome to his office, where he continued as a student until his graduation at Rush Medical College at the close of the session 1848–9.

As sagacious an observer as Dr. Brainard could not, and did not, fail to mark in this new student an ability and determination, combined with a zeal and untiring industry, which were sure to result most honorably. From first to last he was invited to assist in all of Prof. Brainard's important operations, and during the last years of his pupilage was frequently sent to perform such as he could not attend. The warm friendship and confidence thus commenced, ceased only with the life of that great surgeon and teacher.

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The last winter of his pupilage, Dr. Freer was appointed acting Demonstrator of Anatomy by Prof. Wm. B. Herrick, then professor of that department. After graduation he contracted a copartnership with Dr. John A. Kennicott, of Wheeling, Cook county, in whose genial society he passed some of the pleasantest hours of his life.

In June, 1849, he married Miss Katherine Gatter, of Wurtemberg, Germany. In a private note addressed to the writer of this notice, he says: "Our union has been a happy and prosperous one, and in fact I believe I owe much of my success in life to my wife." A daughter and three sons were the fruit of this marriage, all of whom are now living. The eldest, Frederick W. Freer, is a rising young artist of Chicago.

In the spring of 1850, he received by *concours* the regular appointment of Demonstrator of Anatomy in Rush Medical College, a high honor, as the place was very ably contested for, among others, by the late distinguished Prof. E. S. Cooper, of San Francisco, California. From this time he gave a part of Prof. Herrick's course, comprising the descriptive anatomy of the bones and muscles, and during Prof. Herrick's absence in Europe, he gave the entire course.

In the summer of 1855, he was appointed Professor of Descriptive Anatomy.

His duties from the time of his appointment, in 1850, to his final sickness, demanded and received great activity, both of mind and body. Whilst Prof. Brainard occupied the position of Surgeon of the U. S. Marine Hospital, Prof. Freer was his constant and invaluable deputy.

It was at a clinical lecture given by Prof. Freer, at the old Marine Hospital that the writer first met and formed his acquaintance. He was forcibly impressed then by Dr. Freer's anxiety for accuracy in diagnosis, rationality in therapeutics, and perspicuity in conveying his ideas to his pupils. An intimacy of nearly a quarter of a century has strengthened the conviction then entertained, that these were strong points in his professional character.

On the re-organization of Rush Medical College in 1859,

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Prof. Freer was transferred to the chair of Physiology and Microscopic Anatomy, a position he occupied up to the time of his decease.

Prof. Blaney retiring from the college in 1872, Prof. Freer was elected to the Presidency.

Aside from his connection with the college, he has filled many important positions. He was formerly, for several years, one of the medical staff of Mercy Hospital, and since the re-opening of Cook County Hospital, soon after the close of the war, was appointed one of the Medical Board, which position was only vacated by his death. He was also consulting surgeon of St. Joseph's Hospital, of the Hospital for Women of the State of Illinois, and many other public charities.

Prof. Freer was appointed Brigade Surgeon very soon after the breaking out of the war, but after having served some three or four months, was obliged to resign in consequence of ill health.

In 1864, he was appointed U. S. Enrolling Surgeon for the Chicago District. In the discharge of the duties of this position, he gave great offence to several irregular practitioners by refusing to receive as authoritative their certificates of disability. They thereupon, through a "committee," preferred charges against Surgeon Freer, addressed to Brig. Gen. Jas. B. Fry, Provost Marshal General at Washington. On the basis of these charges, a Court of Investigation was ordered, and great popular professional interest was excited as to the result.

The trial ended in a complete discomfiture of the complainants, and largely increased confidence in Surgeon Freer, both by the Government and the community. [Vid. Chicago *Medical Journal*, March, 1865.]

In 1867, Prof. Freer sent his family to Europe, following them a few months after. They remained until 1871, and he, returning each year to give his course of lectures in the college, spent the remaining months in Europe. He traveled through the British islands, France, Germany, Switzerland and Italy, visiting all the principal cities and points of interest, taking ample time for observation. He attended the Medical

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Congress in Paris during the Exposition of 1867, and afterwards spent a considerable period in visiting their hospitals and medical schools.

So also he visited the most celebrated schools of England, Scotland and Ireland in 1868, and he had reason to be pleased at the consideration and courtesy extended by many of their most eminent professional men. On this tour he exhibited to Prof. Bennet, of Edinburgh, and others, his discovery of the structure of the blood corpuscle, by means of direct light, using a Wales Illuminator which he carried with him.

In 1870, he spent four months in Vienna, familiarizing himself with its great hospitals.

His last voyage was in 1871, when, after a trip to Italy extending as far south as Naples, and a few months in the Tyrol and Munich, which latter had been the family's place of residence since 1868, he returned home in September, bringing them with him.

On his several visits to Europe, he had secured many articles, not only adapted to adorn his home, but of rare scientific and professional interest. These and other souvenirs, of his residence and tenements which had afforded him means to indulge his tastes for study and travel, and which, earned by industry and economy, he had a well-won right to look forward to as affording ease and comfort in his declining years, in that terrible night of October, a few short weeks only after his return, were swept away in the general conflagration—himself and family barely escaping with their lives.

Younger men than Dr. Freer, might have given up in despair, but he in nowise disheartened, returned with energy to his practice, to the College and the hospitals.

Notwithstanding this terrible reverse, it is a source of unmingled satisfaction to know that at his death he left his family not rich, but comparatively free from debt and with a modest competence.

Although circumstances conspired to place Dr. Freer, as a teacher in the elementary department of Physiology, he was distinguished, not only popularly but professionally, both as a physician and surgeon.

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The first eight or ten years of his professional life, his practice was devoted largely to surgery. He performed nearly all the operations of note from that for cataract by extraction, to excision of knee-joint and elbow-joint with entire ulna and head of radius, before Carnochan's case.

Perhaps he did not originate much in surgery, but he suggested and practiced several things of value. He is entitled to priority in suggestion of the use of collodion in erysipelas, burns, &c. So, also, the first publication of the use of adhesive plaster in fractures of the clavicle, a form of treatment the advantages of which are not even yet fully appreciated by the profession, is due to him.

However, it may be claimed for him that he was decidedly original in his application of the general principles of both branches of the pofession. He always seemed to feel degraded when either operating or prescribing merely by rule.

From the time of his entrance upon the profession, to use his own language, he "worshipped nature as fervently as ever the Incas did the sun, and for this reason was never guilty of knowingly putting brakes on her wheels."

The highest eulogium that can be pronounced upon him is furnished by the record of his life. That shows that whatever he undertook to do, he sought to do in the best possible way. There was not a scintilla of sham or pretence in his nature, and he was a vigorous hater of both. What he could not tolerate in himself, that he could not overlook in others. Hence he was little loved by "irregulars," either outside or inside of the scientific pale, and was very frequently a target for their attacks. Commencing medical study when his life was a little more than half gone past, he commanded all his faculties by an indomitable will, to their uttermost of service. He was never idle, and in the height of active practice was never heard to say he had no time to read and investigate.

"Self-made men," it has been said, are liable to be saturated with vanity at the success achieved. But up to the hour he took his bed for his last sickness, Prof. Freer never boasted, or even wore for a moment the appearance of pride

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for what he had done, but rather, lamented the imperfection of the past, and laid out designs for harder work in the future.

Late in life he added largely to his juvenile knowledge of the French language, and became a proficient in the German.

What he knew, he knew thoroughly. His exact anatomical knowledge made him a safe operator, whilst his sound judgment made him a successful physician.

Physiological study and experimentation led him, more and more, to distrust the reported results of many experiments, instituted and commented on by men whose names have a certain repute in the scientific world, and he was not satisfied until, personally, he had confirmed or confuted them. No "authority" but Nature would content him. A zealous student in this department, he did not shrink from the conclusions to which physiological research led. His practice as a physician was thoroughly pervaded by it. Coming somewhat slowly to a diagnosis, and perhaps more slowly still to the therapeutics, every one who has met him in the clinic or in consultation, will remember, with highest respect, the solidity of the reasons he was able and willing to give for the opinion and the action. As a medical teacher, the same qualities of mind were manifest. Not fluent of speech, yet his language was always accurate and well chosen. Not devoid of a certain dry humor, he rarely indulged, while lecturing, in anything beyond a clear and correct statement of matters of fact. New students, and superficial older ones. did not fully recognize his worth, but those more advanced, and who came to the College solely to acquire knowledge, yielded him close attention, and learned to honor and venerate him as one who was master of the subject, was anxious to impart real instruction, and speaking, spoke as one having authority.

As an experimenter, Prof. Freer was eminently "at home." He was remarkably successful. Here his knowledge of both human and comparative anatomy shone forth. The diversities of organization which too many vivisectors greatly disregard, always received due consideration, and, as usual with him, he

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came to no generalizations with undue haste. His untimely demise has prevented publication to the world of many discoveries of great value, that now are only to be gathered up from the note-books and memories of his pupils and intimates.

As a citizen he was patriotic and public spirited. Shrinking from mere notoriety, he was, nevertheless, widely known and generally beloved, and his loss is mourned by very many who have been the grateful recipients of his solid but unostentatious beneficence. His private life was ever stainless, and in all his relations, whether with individuals or the public, he was irreproachable. By his colleagues in the faculty, and by his friends he was earnestly beloved, and he reciprocated their attachment with all the warmth of his kindly heart.

The grief of his family and immediate friends, if capable of any amelioration, may find it in the thought that, not only the profession of his choice, but the entire community have shown themselves anxious to pay just tributes to his worth, and embalm his memory in heartfelt homage.

Dr. Allen also read a paper containing a statement of Dr. Freer's last illness, and the autopsy, as follows:

Dr. Freer's sickness commenced during the last week of Feb., the primary symptoms being those commonly observed during the onset of a severe cold, aggravated by a profuse laryngeal and post-nasal catarrh of an unusually distressing character. This was speedily followed by intense paroxysmal pain in right frontal and right lateral regions of head. At first these paroxysms were of short duration, but became gradually more prolonged until the 8th of March, when the pain, though less severe, continued during the day and night, after which it did not return.

March 9th, soon after the cessation of pain, vomiting commenced, and continued, with irregular intervals of from three to six hours, accompanied by intolerable burning sensations in epigastric region, until March 29th, when it suddenly ceased.

March 11th. Divergent strabismus of the right eye, with slight dilation of pupil. These continued more or less marked until death.

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From March 9th until 29th, there was evidence of great depression of the nerve centres. The pulse varied from 58 to 70 per minute until the 20th, when it became more frequent and variable, at times being too irregular to count. Respiration during sleep fell to 5–7–8, and was rarely 12 per minute; while awake it varied as the mind was acted upon. During this period there was marked jaundice. The urine was loaded with bile and of a high specific gravity—the bowels persistently constipated. The vomit contained large quantities of changed bile and broken down blood. Temperature varied slightly from normal. The mind active, feeble and confused at times, until from the 22d to the 29th there was constant delirium with periods of wild hallucination.

On the 28th, an erysipelatous blush appeared upon the scalp and advanced over the forehead, finally involving both sides of the face and head. Simultaneously with this, the vomiting ceased, the mind cleared, the general symptoms improved, food was taken in considerable quantities, and hope of recovery was entertained.

On the 7th of April there was a general relapse—the vomiting returned, the respirations slow and at times labored, the pulse irregular, the mind feeble and wandering. The power of life failed rapidly until the 12th of April at 5 o'clock P. M., when he passed quietly away.

AUTOPSY.

The autopsy made on the 13th of April by Drs. Bogue and Wadsworth, in the presence of members of the Faculty of Rush Medical College, showed the cause of death to have been meningitis, the basilar portion of the brain having been the seat of the greatest amount of inflammation.

The heart and lungs, stomach, duodenum, liver and kidneys being normal.

A critical examination of the brain, made by Drs. Danforth and Wadsworth, is reported as follows; to-wit, weight of brain, 53 oz.

The dura mater thickened and opaque, with extensive adhesions in front and over the superior or convex portion of cerebrum. Falciform process ossified.

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An extensive exudation of gelatinous material was found covering the hemispheres.

The pia mater and arachnoid were not changed.

Transverse sections of the cerebral lobes were made from above downward to the base of the brain, but no abnormal appearances were found.

The sulci between the cerebral convolutions were very deep and complicated; and the limit between the white and gray matter was strongly pronounced.

The posterior cornua of the right lateral ventricle was wanting. The cornua of the left lateral ventricle was filled with bloody serum.

The base of the brain presented marked indications of recent inflammation. The third ventricle was distended by plastic lymph, which contained a vast number of protoplasmic bodies. The basilar arteries were half filled by soft yellow clots, which must have been some days in forming.

Dr. N. S. Davis moved that the report, together with the report of the autopsy, be referred to the Publication Committee. The motion prevailed.

Dr. Worrell read the following personal tribute to the memory and worth of the late Dr. J. W. Freer.

Dr. J. W. Freer.

Death, the great archer, has hurled his shafts at *shining* marks since last we met, and has snatched from the embrace of his dear family, and from us, his admiring companions, your beloved Freer. We miss his genial face on this anniversary of the State Society, whose sessions he always attended, and who felt great concern for the welfare of all its members.

He has gone to that undiscovered country from whose bourne no traveler returns to bring tidings of his safe arrival. His dust now mingles in your beautiful Graceland, with that of Herrick, Brainard and Blaney, and many others who have made your city illustrious by their achievments. All honour to his glorious memory.

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"Let him rest; it was not often
That his soul knew repose;
Let him rest; they rest but seldom
Whose successes, challenge foes.
He was weary, worn with watching;
His soft hand of pity hath pressed,
Oft on temples sadly aching.
He was weary: let him rest."

Dr. Herrick was born in the year 1831, in Huron County, Ohio. Shortly after the birth of young Herrick his father removed to a farm near Fort Wayne, DeKalb County, Indiana, where his son acquired the rudiments of his education. He read medicine with W. S. Goodell, M. D., of Anderson, Indiana, attending two full courses of lectures at Ann Arbor, University of the State of Michigan. Graduated in 1852. Immediately after he located at Kansas, Edgar County, Illinois, on the I. & St. L. road (formerly known as Midway), where he remained in the active practice of his profession until his death, which occured in 1873. Except the time he was absent during the late rebellion, at the breaking out of which he entered the army as Captain of Company K., 34 Reg't Ill. Vol's. But it was soon discovered that such surgical talent and skill should not be in the lines, and he was transferred to Surgeon of the Regiment, afterward promoted to Medical Director 14th Army Corps, 4th Division, on Major Gen. Reynolds' staff. At the close of the war he returned home, and resumed his practice. Was a member of the Esculapian Society of the Wabash Valley, and once the President. Was elected Vice-President of the Illinois State Medical Society, at their session at Springfield. He died in the prime of life, while his star of usefulness was yet rising. Greatly missed by his numerous patrons, the rich as well as the humble poor, who severely felt the loss of his generous practice.

It was ordered referred to the Publication Committee:

Dr. Davis—Stated that, as he had announced, there was a short obituary of Dr. J. N. Allen, written by Dr. Thomas, of Princeton. Dr. Allen had resided at Mt. Sterling, where he died May 5th. The obituary was short, and on motion of Dr. Davis, it was referred to the Publication Committee.

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James N. Allen, M. D.

The subject of this sketch, was born in Marine, Madison county, Illinois, on the 15th day of November, 1820, and died at Mt. Sterling, Brown county, Illinois, May the 5th, 1877. His death was partially, at least, the result of an injury he received from the falling of his horse some eight weeks prior to his death. He was the oldest son of a family of five children, two of whom are still living, Mrs. F. Collins, of Quincy, and Dr. C. C. Allen, of Chillicothe, Illinois.

I know but little of his history up to the time when he commenced to prepare for his profession. In 1840, he began the study of medicine in his native town, and in 1843 he graduated at the medical department of the Missouri University, then known as Kemper College. After graduating he first located at Clayton, where he remained about one year. He then moved to Mt. Sterling and entered into copartnership with Dr. John Irwin, continuing with him until the death of Dr. Irwin in 1846. On the 12th day of November, 1846, he was married to Miss Phœbe H. Burton, who survives him. He was the father of five children, three of whom are living. The Doctor was an ordained elder in the Presbyterian church, having held that position in the church at Mt. Sterling for the past 26 years. He was a noble example of the Christian physician and gentleman. The Masons of Mt. Sterling say of him in their resolutions, that "Masonry had lost one of its most devoted members, society an honored and useful citizen, the medical profession a talented and skillful physician, and more than all, his wife a fond and affectionate husband, and his children an indulgent and loving father." But it is principally with the Doctor as a member of our profession that we have to do. Dr. James N. Allen had few equals as a physiciau and surgeon in our State. His counsel was sought by a large part of the community, and his judgment was highly respected by the physicians of Brown and surrounding counties. In 1862 he went to Quincy with the 50th Illinois Infantry, he having received a first surgeon's certificate. He was soon after assigned to duty at Hospital No. 1, located at Quincy, and continued

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there on duty until the close of that Hospital. He was then transferred to Mound City and remained there on duty as surgeon until the close of the war, when he returned home and resumed his private practice, enjoying as before the war, a large and lucrative practice, and having the confidence of his neighboring physicians, in as large a degree as, perhaps, any other man in that section of the State. In all the relations of his life, whether as husband, father, physician, or friend, Dr. Allen was a true man. Nothing more than this can be said of any man. But the Doctor is gone. He died in the full vigor of his manhood, with all his faculties matured, when to human ken there appeared to be many years of usefulness yet before him. His bereaved family and friends have the consolation that he died with a full assurance of a blissful future. Peace to the ashes of our departed friend.

J. F. THOMAS, M. D.

It was ordered referred to the Publication Committee.

The Board of Censors reported, recommending the following for membership: Dr. Hatch, of New Salem; Dr. G. E Willard, Chicago; Dr. J. H. Bates, Chicago; Dr. L. R. Williams, Chicago. The Committee also reported as follows: "There being no evidence to sustain charges preferred against the Jersey County Medical Soiety, we would recommend that the charge be dismissed."

The report was adopted.

On motion of Dr. Davis, the rules were suspended so as to admit the reports of the Treasurer and the Committee on Publication. Dr. J. H. Hollister, the Treasurer, submitted the following report:

TREASURER'S ANNUAL REPORT.

The fifteenth annual report of the present Treasurer is herewith submitted for the current year.

JOHN H. HOLLISTER, *Treasurer*,

In acc't with ILLINOIS STATE MEDICAL SOCIETY, Dr.

1876.		
May 18.	To balance as per last statement	$ 10 82
" "	To cash received at Champaign	331 00

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1877.		
May 14.	To cash collections during the year	222 00
	Amount in full	563 82
	Amount advanced by Treasurer	62 73
		$626 55

CONTRA.

		Cr.
1876.		
May 18.	Paid Fergus printing bill	$130 00
June 10.	For reporting proceedings	53 10
" "	Lithograph for circulars	4 50
" "	Envelopes and stamps for same	13 25
" "	Illustrations for Transactions	15 00
Aug. 21.	Three hundred copies Transactions	375 00
" "	Mailing Transactions	20 50
1877.		
May 14.	Secretary's current acct	6 00
" "	Treasurer's current acct	5 80
" "	Dr. Fitch's acct. for circulars	3 40
	Amount paid in full	$626 55

Respectfully submitted,
JOHN H. HOLLISTER, *Treasurer.*

MEMORANDA.

The indebtedness of the Society at the last annual meeting was stated to be $118.46.

The exact figures, upon final settlement with the Fergus Printing Co., was	$130 00
Deduct cash in treasury	10 82
The indebtedness of Society was	$119 18
The receipts for the current year	$553 00
The amount less than for 1876	44 00
The expenses for 1876	714 16
Expenses for 1877	496 55
Saving on salary	100 00
Saving on printing	100 00
On general expense	17 61
Excess of receipts over expenses, 1877	56 45
Present indebtedness	62 73

Dr. N. S. Davis stated that the report was accompanied by bills as vouchers, which had been audited and approved, as far as he, as Secretary, was authorized to audit them. The report was referred to the Committee on Publication.

Dr. N. S. Davis submitted the report of the Committee on Publication, as follows:

REPORT OF THE COMMITTEE ON PUBLICATION.

As soon as possible after adjournment of the Society last year, the record of proceedings and papers were prepared for

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the press. By the 17th of August, ninety days from the annual meeting, the volume of Transactions was printed, bound, and ready for delivery to all members who had paid their annual dues. Three hundred copies of the volume were published at a cost of $375. Up to the commencement of the present meeting, 45 copies had been distributed to medical journals and State medical societies, 157 to members of the Society, leaving nearly one hundred copies on hand. We have also on hand a number of copies of the volume for 1874 and 1875. Much of the credit for promptness in issuing and distributing the volume for 1876, is due to the Treasurer, who took entire charge of the distribution to members. The Committee on Publication desire to issue the Transactions of the present meeting strictly within the limit of time indicated by the by-laws. To enable us to do this, members must place their reports and papers in our hands promptly, and when *proofs* are sent to them, such proofs must be read and returned with equal promptness. It is just as easy for all parties, and far more satisfactory to the members of the Society, to have the Transactions issued within ninety days from the annual meeting as at any later period.

Respectfully submitted,

N. S. Davis, *Permanent Secretary.*

On motion of Dr. Worrell, the report was received and referred to the Committee on Publication.

Dr. Pierce submitted the report of the Committee on Nominations as follows:

REPORT OF THE NOMINATING COMMITTEE.

Your committee, after a brief and harmonious session, have decided to recommend the following persons for officers of the Society for the ensuing year:

President—J. L. White, - - - - - - - - Bloomington.
First Vice-President—E. P. Cook, - - - - - - - Mendota.
Second Vice-President—B. M. Griffith, - - - - - Springfield.
Treasurer—John H. Hollister, - - - - - - - Chicago.
Assistant Secretary—H. B. Buck, - - - - - - Springfield.

Permanent Committees.

Board of Censors. { M. W. Walton, - - - - - - - Ridott.
E. Ingals, - - - - - - - - Chicago.
P. H. Barton, - - - - - - Danville.

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Committee on Practical Medicine.	C. W. Earle,	Chicago.
	D. S. Booth,	Sparta.
	J. T. Pitner,	Jacksonville.
Committee on Surgery.	Moses Gunn,	Chicago.
	W. P. Peirce,	Lemont.
	David Prince,	Jacksonville.
Committee on Obstetrics.	T. D. Fitch,	Chicago.
	E. R. Willard,	Wilmington.
	Ellen Ingersoll,	Canton.
Committee on Drugs and Medicines.	N. S. Davis,	Chicago.
	E. P. Cook,	Mendota.
	Wm. E. Quine,	Chicago.
Committee on Diseases of Children.	C. C. Hunt,	Dixon.
	Harriet Botsford,	Chicago.
	Lucinda Corr,	Carlinville.
Committee on Necrology.	H. A. Johnson,	Chicago.
	T. F. Worrell,	Bloomington.
	Thomas Gault,	Rock Island.

Special Committees.

Otology—Samuel J. Jones,	Chicago.
Neurology—J. S. Jewell,	"
Opthalmology—E. L. Holmes,	"
Electro Therapeutics—Plym S. Hayes,	"
Malaria—N. Wright,	Chatham.
Fractures of Lower Extremities—W. L. Goodell,	Effingham.
Croup—H. Z. Gill,	Jerseyville.
Throat and Nasal Passages—J. P. Matthews,	Carlinville.
Dysentery—John Wright,	Clinton.
The chronic and incurable insane poor of Illinois. R. J. Patterson,	Batavia.

Next place of meeting, Springfield.

Committee of Arrangements.	B. M. Griffith,	Springfield.
	Justus Townsend,	"
	A. A. Patterson,	"

The report was adopted without debate.

Dr. J. S. Jewell spoke on the influence of the nervous system upon the nutrition of the body, as follows:

REMARKS ON TROPHIC ACTION OF THE NERVOUS SYSTEM.

By J. S. Jewell, M. D.

The subject of my remarks, which will be oral, is that of the influence of the nervous system over the nutrition of the body.

For a long time it has been supposed that the nervous system exercises such an influence; but no proofs of the same have

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been offered until quite recently. Until the present time, the majority of physiologists have been disinclined to admit that it exerts such influence; and for various reasons, but especially for this reason, that among the very lowest animals which have no demonstrable nervous system, and many plants, and in certain parts of the higher animals, such as cartilages, the act of nutrition is accomplished apparently, without the agency of the nervous system. On the basis of these facts, an induction has been made which has been extended through the entire animal kingdom, and it affirms that the nervous system has nothing to do with the nutrition of the body. Those physiologists who object to the exercise of this influence by the nervous system, also make the mistake of supposing that the nervous system, if it has anything to do in the control of the nutrition of the body, must do everything. But this is not necessary. The nutrition of the body does not *depend* upon the nervous system. It is simply *controlled* by it; the power that is in a muscle does not depend upon, or is not derived from, the nervous system. And so for the nutrition of the body.

For some time past, I have been giving attention to this matter, and have met with certain facts which seem to me to throw light on it that has been hitherto wanting. Among those physiologists who admit that the nervous system exercises an influence over bodily nutrition, there are two classes: The first comprises those who assert that there is a special trophic nervous system set apart for that purpose. The second class comprises those who deny this; but yet admit that it exercises the influence claimed. Some little time ago my attention was directed to the ganglia upon the posterior roots of the spinal nerves. These ganglia are found on the posterior roots of all the spinal nerves and corresponding members of the cranial nerves throughout the whole vertebrate series. No animal, however high or low, in the scale of vertebrates, is devoid of these little bodies upon the posterior roots of the spinal nerves. For what purpose do these little bodies exist? What is their structure? What relation have they to the fibres of the sensory root which passes through them? Some time ago, I set myself to solve this question. And first as respects the structure of the same. This has been a matter for study since 1838, or even earlier—first by Remak and

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Ehrenberg, and so on down to the present time. Many of the first histologists of the last 30 or 40 years having given the subject of the structure of these bodies careful attention. They consist largely of small nerve cells, giving off one or two poles. But concerning the number of the poles that they give off, there are two opinions. One maintains that they give off but one, and the other that they give off two. Those who hold to the latter position claim that one of them passes out from the cell in a more or less distinct line. The other is wound about the first pole in a spiral manner, but finally takes an independent course. My own researches have led me to think that in most instances, they have but one pole. They are true nerve cells, but have but one pole. The next question as to what becomes of the fibers given off from these cells? Do they pass to the spinal cord with the fibers of the sensory root proper? or do they pass towards the periphery of the body, or do they pass both ways? The weight of testimony has been, in latter times, beginning with Koelliker, in favor of their passage towards the periphery, rather than toward the spinal cord. And such was my own opinion until last year certain researches came to my knowledge that made me doubt on this subject.

In the first place, a paper was read before the Vienna Academy of Sciences, by a histologist by the name of Holl. He set himself to count the number of nerve fibers that are found in the motor and sensory roots of the spinal nerves. In counting the fibers of the sensory root, he made a section of the root. Both the peripheral and central sides or aspects of the ganglion were counted on the face of both sections; and he found, on the average, 1,600 or 1,700 fibers of the sensory root of the nerve; about the same number in the peripheral as to the central side of the ganglion. This fact appeared to me singular, and led me to abandon my first opinion as to the direction of the fibres that proceed from the cells of the spinal ganglia; because if the fibers that take their origin in these cells passed towards the periphery of the body, the peripheral portion of root should have as many more fibers than the central portion as it derives fibers from these cells.

About this time, my attention was called to some microscopic specimens prepared by Mr. Amidon, of New York, a student of

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medicine, and brother-in-law of Dr. E. C. Seguin, which seemed to me to throw further light on this question. He found, upon examination of a spinal ganglion treated with perosmic acid, that the fibers in the sensory root, where they pass through the ganglion, have frequently joined to them, at the conjunction of Ranvier, another nerve fiber. This fact came to my knowledge simultaneously with a similar statement by M. Ranvier, himself, found in the *Archives de Physiologie*, concerning the mode of termination of one nerve fibre in another in the spinal ganglia, and which he called the *terminaison en* T. In the presence of these facts, it seemed probable that the fibers which are given off by the spinal ganglia instead of passing either towards the periphery, or centrally towards the spinal cord, join the sensory fibers as they pass though the spinal ganglia. So much for an outline of the anatomical facts.

Many years ago, as is well known, an English physiologist, by the name of Waller, made the following observation: Upon dividing a nerve in a living animal, he permitted the animal to be free for a certain number of days, and then examining the divided ends of the nerve, he found that the nerve fibers in one of the stumps of the divided nerve had been destroyed for a considerable distance from the point of section. Whereas, the other stump, was preserved in its integrity almost up to the joint of section. Following up this observation, he found that it proves true that for the same nerve, the degeneration, as it was called, always takes place in the same direction. In reflecting upon this subject, he accounted for it in this manner: That at one of its ends, the nerve fiber is connected with a nerve cell, which exercises an influence over its nutrition. In order to preserve its nutritional integrity, it is necessary for the fiber to maintain its connection with this cell. On account of the influence which the cell was supposed to exert over the fiber, it was called the nutritional or trophic center. And this is the so-called and widely known "Wallerian degeneration." Now, applying the doctrine to the posterior roots of the spinal nerve, we reach the following results: If a section of the sensory root is made between the ganglion and the spinal cord, degeneration occurs of that portion of the divided nerve yet attached to the spinal cord. Whereas, that portion which belongs to the gan-

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glion has not undergone so much degeneration. If, now, another sensory root is divided externally, instead of internally, to the ganglion, that portion of the divided nerve which lies peripherally to the section undergoes degeneration; but that part which remains attached to the ganglion preserves mostly its integrity. Thus, it appears that the ganglion exercises a kind of influence upon the nerve fibres that pass through it. The trophic centers, then, in the Wallerian sense, of the sensory fibers, exist in the ganglia on the posterior roots of the spinal nerves. Here, then, is an instance, at once well authenticated, experimentally, of the influence exerted by the nervous system over the nutrition of a portion of the body. So long as the sensory nerve fibers remain in connection with the spinal ganglia, they preserve their structural integrity. When separated from it, they lose it sooner or later, and are finally destroyed.

But now is there any reason for supposing that the spinal ganglia exert an influence upon non-nervous structures, as well as upon the fibres of the sensory root? I think there is. Thus far the evidence is partly experimental and partly pathological, especially the latter, and it is, moreover, largely a matter of inference. In a work on the trophic nerves, published some years since by Samuel, of Koenigsburg, an experiment is recorded that may illustrate the case. He performed the following experiment: Taking a rabbit, the trigeminal nerve was exposed at the point where it crosses the petrous bone, at which point is found its ganglion, which corresponds to the spinal ganglia upon the spinal nerves. He introduced fine needle electrodes from a battery into this ganglion, and caused a tolerably strong current to pass through the ganglion so as to irritate it, and then set the animal free. Soon afterwards an intense irritation was set up in the corresponding eye, to which the upper division of this nerve leads. So the eye became congested, and gave evidence, in its depths, of an inflammatory change, as well as on its surface. It became intensely sensitive to light, and so sensitive to contact that merely touching the lid of the eye would throw the animal into convulsions; and so the case passed on. This case has been objected to by many of those who have studied the effects of section of the trigeminus upon

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the eye. Facts in relation to this subject were first observed by Majendie many years ago. Since that time his experiments have been re-performed by Dr. Brown-Sequard, and by various other physiologists, especially by Snellen and Buettner. The conclusion reached by these latter physiologists was that the inflammatory effects depend not so much upon the section of the nerve, as upon paralysis of the sensibility of the eye, which permits it to be injured without the animal knowing it. On account of this loss of sensibility, it is not able to take care of the eye. Objects get into and irritate it, and lead to ulceration, etc. For it was ascertained that if the eye of the animal was protected from light and dust or other physical harm, after section, that the ulcerations, if any followed at all, were in much less degree than when the eye was exposed. Hence it was concluded by Dr. Brown-Sequard, and these physiologists, that the section of the trigeminal nerve has no influence upon the nutrition of the eye, and has nothing to do directly with the inflammation of the same. This view is, however, very properly criticised by M. Charcot, who points to the fact, which these gentlemen seem to have overlooked, that in Samuel's experiment the eye was not deprived of its sensibility, but was found more sensitive than the eye on the well side.

But certain pathological cases aid us in solving this question. I have collected a great many from the various parts of medical literature, and will submit a very few of the cases: One of the most notable is one mentioned by Sattler in a recent communication to the Vienna Academy of Sciences. It is that of a man who had been poisoned nearly to death by coal gas. Upon partial recovery from the effects of it, he was observed to have a congestive trouble with one eye. Congestion of the skin of the forehead followed on the corresponding side, and an eruption known as zoster simultaneously with the irritation of the eye. After a time this patient died, and a most pains-taking and thorough investigation was made. The only pronounced lesion that was found to exist was in the ganglion of Gasser—that part of it more particularly through which pass the fibres of the upper division of the fifth pair of nerves. From the ganglion backward towards the brain there was no disease. From the ganglion forward towards the eye along the course of the nerve,

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it was in the same condition, but less markedly so at its point of departure from the ganglion; until at its peripheral distribution at the skin, there were few, if any signs of disease. In this case it would seem pretty clear that the disease had been set up in a certain part of the ganglion of Gasser, which corresponds perfectly to the ganglion upon the porterior roots of the spinal nerves; and then through the ganglion an influence had been radiated downward along the course of the sensory nerve fibres that pass through it, which resulted in the congestion and inflammation of the skin of the forehead and eye.

Very similar cases are on record to the one I have just related. I have collected a large number of them from the periodical literature, especially, of Europe. But this is a fair sample of them all. In respect to cases of this kind, one difficulty arises; a difficulty that has been especially insisted upon by Friederich, of Heidelberg, who declares, that, in all such cases, there has been a descending neuritis, which has traveled along the nerve, from the point of lesion out to its peripheral distribution; and, in this way, invades the tissues to which the nerve goes. There can be but little doubt but that this may occur. But that it suffices to explain all the phenomena of certain cases may well be doubted.

However, the impossibility, hitherto, of pointing out the cases known to be absolutely free from objection of Friederich, makes it necessary to resort to some other method of establishing the point in question. Up to this period, such proof has been wanting. But, though this is the case, there are many strong analogies in favor of this view for which I am contending.

In the first place, the action of the motor nerves upon the muscles is certainly very marked and pronounced. Very extraordinary phenomena occur in the action of the muscles, through the agency of the nerves distributed to them. Moreover, the occurrence of changes in the secretions and excretions of the body under the nervous influence, are now well known. The saliva may be greatly increased or diminished; the secretion of the milk may be greatly increased or diminished; and the secretions from the skin, the secretions from the liver and the kidneys are known to be largely under the control of the nervous system. Not to go further in this direction, I may be

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permitted to say that the changes which take place in the secreting and excreting organs of the body, as they perform their functions, are very closely allied to, if not identical with, nutritive action. The actions that take place in the liver, the salivary glands and kidneys, are accomplished through the agency of cells, and those cells of the secreting structures appear to be very closely under the control of the nervous system.

From such considerations, we may gain a strong presumption in favor of the view that the nervous system exerts an influence over the nutrition of the body. But it will not be possible for me to enter fully into the discussion of this question. My object at the present time, has been to lay before you a few facts touching this important subject, and to make certain suggestions better calculated to stimulate thought than to set forth any doctrine of trophic action, which, indeed, cannot be fully done on the basis of our present knowledge. I will, however, before ceasing to speak, state to you what I consider at least probable in regard to the mechanism through which the trophic action of the nervous system occurs. It is my belief that the ganglia upon the posterior roots of the spinal nerves constitute members of a true trophic nervous system. But I do not believe these ganglia, connected, as they are with the fibers of the sensory nerves that pass through them, constitutute only a small portion of the trophic nervous system. They bear possibly the same relation to it, that the ganglia of the fundamental chain of the sympathetic may possibly do to the vasomotor nervous system. It is my belief that there is a central trophic nervous mechanism in the gray matter of the spinal cord. And connected with the trophic tract are the nerve fibers motor as well as sensory, that enter and leave the spinal cord. That from this tract in the spinal cord an influence is exerted upon the nutrtion of the body to be compared with the influence exerted by the spinal cord over the muscular system; or to be compared to the influence exerted by the spinal cord over the vascular system. It is my belief that this tract in the spinal cord is summed up in the medulla oblongata, and is probably identical with the "heat regulating" center, to which reference has been made by various observers, as by Riegel, by Tschichichin, Wood and others. That from this center of nutrition,

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nutrition of the entire body is controlled or influenced. Disease of this particular tract in the spinal cord, and in the medulla leads to changes in nutrition, the rate and character of nutrition, and to various other phenomena, to which these nutritive changes give rise, such as changes in the temperature of the part, and so on.

It is by involving this tract in the spinal cord that those rapid sloughings, or changes in the nutrition of the extremities, and other parts of the body occur, such as have been described by Brown-Sequard, and others, as following lesions in the spinal cord. Without giving you the reasons for this belief, it is my opinion that it is through disturbance of this tract of the spinal cord, or in the course of various nerves, whether sensory or motor that the so-called idiopathic inflammations occur; as, for example, inflammations of the lungs, or limited inflammations of the liver, or in some single muscle or group of muscles, or of the skin, as in various non-parasitic disorders of the skin. These inflammatory disorders that have no demonstrable physical or chemical local causes, in my opinion, are to be attributed to irritation of the part in which the inflammation has its seat, through the medium of its nerves, and especially through the medium of that part of the nervous system that I have called the trophic, and has been called so since the researches of Samuel. Irritation once set up in the part; in other words disturbance of its nutrition, sooner or later is followed by congestion in the same part, in accordance with the maxim known since the time of Haller, "where there is irritation there is congestion," the congestion following in the wake of the irritation. As to the mode of occurrence of the congestion following in the wake of irritation, it is another question, and one that, it seems to me me, we are now in condition to explain. I may say in passing, however, that the congestion arises largely in the part which is the seat of irritation, on account of the irritative action itself embracing the working of the local vaso-motor mechanisms which are involved in the seat of irritation. Their action, it is reasonable to suppose, becomes so far impeded, that they fail to exert over the vessels of the part that degree of tonic action necessary to enable them to maintain their proper size under the expansive pressure of the blood, and the side of the vessel naturally dis-

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tends in proportion, as the local vaso-motor nerves lose their tonic effect over them. In some such way, we may explain the occurence of the congestion of a part after the irritation, the nutrition of which has been disturbed through the channel of its nerves.

If this doctrine that I have outlined can be established upon good grounds, it seems to me destined to throw exceedingly important light on many, hitherto, unsolved questions in pathology. It will afford us a reason, at least a better reason than we have ever yet had for the occurrence, apparently without cause, of local irritation, congestions and inflammations; and may lead, sooner or later, also in a practical way, to improved means for relieving the same.

These suggestions, however, are offered, as I said before, more for the purpose of stimulating thought, and of indicating the direction that I have felt myself warranted in carrying my inferences, in construing phenomena that may be properly gathered under the head of Nervous Trophic Action.

I am still carrying forward my researches upon this subject, and hope in the future to be able to offer a well arranged, thoroughly established doctrine, which will leave the question no longer in doubt, as to whether the nervous system really exerts such influence, as it appears to me it does, over the nutrition of the body; and also, able to point out the practical applications of the doctrine in such a way, I should hope, as to commend it to the profession.

On motion of Dr. Davis, the thanks of the Society were tendered to Dr. Jewell for his report.

The assistant Secretary, Dr. Earle, read the name of Dr. F. L. Wadsworth, proposed for membership. Referred to the Board of Censors.

Dr. S. J. Jones read the following report:

CANTHOTOMY AND SOME OF ITS ADVANTAGES.

BY S. J. JONES, M. D., CHICAGO.

Under the designation of Canthoplasty there has been introduced to the profession a procedure that has been found very beneficial in certain affections of the eye. The term seems to

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imply a plastic operation, and in that respect does not appear to be a happy selection. Canthotomy describes more accurately the operation, which consists in dividing the external canthus, for either temporary or permanent enlargement of it.

It is done on the same principle that incision is performed, through the sphincter ani in fistula in ano when the continued contraction prevents union in the fistulous cavity. A similar but less marked improvement is obtained by vigorous stretching of the sphincter for fissure of the anus.

If only a temporary enlargement of the canthus be desired, a simple incision, either by a knife or scissors, through the skin, orbicularis, and conjunctiva will divide a sufficient number of the fibres of the muscles to diminish its power.

Reunion of the cut surfaces may be indefinitely delayed by separating them daily by a blunt probe. This enlargement may be still further increased by a small incision in the upper lid, at right angles to the horizontal one thus made and about its middle. This will enable the upper lid to be raised with greater ease and to a greater extent, which is of marked advantage in certain cases.

If it be desired to make permanent the advantage thus gained, it can be done by putting in a few stitches bringing into apposition the cut edges of the skin and conjunctiva, when they will unite, leaving the fissure between the eyelids enlarged to the extent of the horizontal incision.

The pain from the operation is not so severe as to require the administration of an anæsthetic. Relief from pain which preceded the operation is sometimes almost instantaneous, especially when the lids are swollen and tense. But little, if any, deformity results.

Among the more marked cases in which this advantage is gained, and which interest the physician in general practice quite as much as the oculist, are those severe cases of conjunctivitis of new-born children, when the lids are tense and livid, and so swollen that they can with difficulty be raised sufficiently to remove the pus that is being secreted in large amount. In most of the cases, the cleansing of the eyes from

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this pus has to be entrusted to a nurse or to the friends of the little patient, who are inexperienced in the treatment of such cases, and the pus is so imperfectly removed that the cornea is kept constantly bathed in it, and the blood-vessels nourishing the cornea are pressed upon, until both conjunctiva and cornea slough. When thus the corneal tissue is thinned, the pressure of the eyelids on the balls, when the child resists the efforts to cleanse the eye, or to apply a collyrium, may, and does sometimes, result in perforation of the cornea with anterior synechia, practically destroying sight in the eye. A simple incision in the canthus, as described, will save the eye from this dangerous pressure; will enable the attendant to cleanse the eye more easily and more thoroughly; will diminish the danger of strangulating the blood-vessels which nourish the cornea, and thus give greater security to the eye, at the same time that it will afford better opportunity of making applications to the inflamed surface.

It is advantageous in persistent ulceration of the cornea from whatever cause. This condition is accompanied by great sensitiveness to light, and consequent persistent closure and pressure of the lids, which keep up irritation of the ulcerated surface.

The excessive action of the orbicularis muscle causes it to become hypertrophied, thus enabling it to press unnaturally upon the ball of the eye, adding to the discomfort of the patient; aggravating the disease; endangeriug sight, and delaying recovery.

Canthotomy also, at times, will give such relief in inversion of the eye-lids as to obviate the necessity of removing an elliptical fold of the skin that is often practiced to remedy such turning in of the lids. In chronic granular conjunctivitis, it is not unusual to find a thickened condition of the mucous membrane, and the fissure between the eye-lids thereby diminished, so that less of the ball is exposed, and the patient believes that atrophy of the ball is occurring. In such cases permanent enlargment of the canthus will generally be found desirable.

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This operation will, also, often render unnecessary the operation sometimes practiced for the removal of the hair bulbs of the eye-lashes, when the lashes have become changed in direction and rub against the eye-ball, so-called "wild hairs," which cause great irritation of the conjunctiva and sometimes ulceration. When this ulceration has resulted in great thinning of the cornea, the remaining laminæ are not sufficient to resist the pressure to which they are subjected, and whilst perforation occurs in some cases, in others there is only hernial protrusion of the cornea and iris, but this is kept constantly irritated by spasmodic movement of the lid over it. Thus we may have added to this, inflammation of the iris and ciliary region, and ultimately have involved the choroid coat with softening and loss of the eye. Division of the canthus, with consequent relief from spasmodic pressure, thus aids in treatment by removing a cause of aggravation, and facilitates the making of necessary applications.

It is thus seen that canthotomy is serviceable; first, in the removal of a seriously aggravating cause in many affections of the eye. And, secondly, that it may be made an efficient auxiliary in the treatment of many of the affections of that organ.

Also the following practical remarks in regard to Iritis:

IRITIS AND SOME OF ITS DANGERS.

It is desired herein, briefly, to invite the attention of the Society to an affection of the eye that is frequently mistaken by those unaccustomed to make critical examination of that organ, for neuralgia.

In inflammation of the iris, there is often, early in the affection, so much cloudiness of the aqueous humor that slight changes in the color of the iris are likely to be overlooked, and the disease may have progressed to a dangerous extent before it shall have been recognized. The supra-orbital pain that so generally accompanies it, is quite frequently mistaken, for neuralgia. Even the disturbance of the eye-ball is often supposed to be only another consequence of the disturbing in-

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fluence which produced the neuralgia, and thus the most favorable time for treatment of the true affection is allowed to pass. The fact that the excessive lachrymation and the red appearance of the eye-ball are not accompanied by excessive mucous secretion nor of pus, is then interpreted as showing that the neuralgia is the chief disturbing cause. This mistake may be, and often is, fatal to sight, for adhesions around the border of the pupil, to the capsule of the crystalline lens, or even occlusion of the pupil itself, may occur within forty-eight hours after the iritis began, if the attack is violent. Where there is present great sensitiveness to light, with supra-orbital pain; contraction of the pupil; discoloration of the iris, as compared with the other one; increased flow of tears; and the injection of the blood-vessels is chiefly in a radiating zone around the iris, in the sclerotica, instead of tortuous vessels in the conjunctiva, there can be but little difficulty in recognizing iritis and not confounding it with neuralgia, which is too often done by those who should not commit so fatal an error.

There are two forms in which iritis manifests itself, which present somewhat different characteristics; viz. plastic and serous iritis. In the plastic form there is more of the rusty exudation upon the iris, with stronger tendency to form adhesions to the capsule of the crystalline lens, and to close the pupil; whilst in the serous form, there is increased secretion, endangering the sight by increased pressure within the eye-ball.

But, whatever the cause of the iritis, or what the form it assumes, the first duty of the medical attendant is to dilate the pupil, with some mydriatic, such as a solution of atropia, and to maintain as much dilatation as possible, until the danger shall have passed. In this stage, it is usually very easy to prevent adhesions, but when once they are formed, their removal is nearly always difficult, if not doubtful or impossible, except by hazardous operations.

In serous iritis, the danger may be diminished by puncture of the cornea, by passing a needle through it parallel with the iris and evacuating, once or oftener, the aqueous humor which is again rapidly secreted.

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The adhesions increase, too, the predisposition to future attacks of iritis, however slight they may be.

If the evil consequences of neglected iritis were limited to the usually severe pain that accompanies it, or even resulting loss of sight in the affected eye, it would be bad enough, but in consequence of the intimate relation existing between the iris, the ciliary body and the choroid coat, the inflammation may extend, resulting in cyclitis and choroiditis, and even the other eye may become involved through sympathy, and the sight of both eyes be lost.

The following report was received by the Committee of Publication after adjournment.

REPORT ON OTOLOGY.

BY H. Z. GILL, A. M., M. D.

Aural Catarrh is the only part of otology to which I wish to direct the attention of the members of the Society and the profession at this time. The word *catarrh* is here used in its broad sense of *inflammation of mucous membrane.*

These catarrhal cases include about *five-sixths* of *all the cases* coming under the notice of the aural practitioner. To say that the more common diseases of the ear are too much neglected by the general practitioner, is to state a fact almost universally admitted. How can this condition of affairs be relieved? Much can be done by even a moderate amount of labor applied in the right direction. In the first place, a knowledge of the anatomy of the ear must be obtained, such as may be acquired by a few dissections carefully made, with the aid of any of the text-books of anatomy. Careful examination of a few cases in a healthy condition, will give a very fair knowledge of the normal condition of the organ; but yet, much more than is possessed by many practitioners, except in a theoretical point of view.

The *instruments* needed are few but important. A set of conical hard-rubber speculums (costing less than five dollars); and a reflector of from six to ten inches focus, on a universal

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joint arranged so as to be held before the eye of the operator by a band around the head, or to a stand to be placed on the table; these are essential and should be in the possession of every medical practitioner. A practical knowledge of their use can soon be acquired by any one. By these means the external meatus, and the tympanic membrane may be examined and their condition ascertained. This being done, the nature of the case may be fully comprehended, or other means may be required to reveal the more obscure features of the case. The use of the tuning fork; the application of the Eustachian catheter; the inflation of the tympanic cavity as well as the many other valuable means now in use are fully described in every complete work on surgery, as also, fully in the works on "Diseases of the ear." What I wish particularly to bring to the attention of the general practitioner is, the importance of recognizing a case of acute, subacute, or chronic inflammation of the tympanic cavity (otitis media,) in order *to prevent permanent loss of hearing, and in not a few cases loss of life.*

Any person with a chronic otorrhœa, is in danger of having, at any time, an aggravation of the symptoms which may lead to very serious or even fatal results. This fact should be fully impressed upon the minds of the profession, to such an extent that physicians will be constrained to warn their patrons of the danger of neglecting such cases. Deaths are constantly reported by Aurists, and others, also, from such cases being neglected, or their dangerous nature not understood. About three-fourths of the cases of inflammation of the middle ear, or tympanic cavity follow a chronic otorrhœa, coming on after exposure to a high wind or draft of air; or occasionally from diving or bathing in deep water, some of the water being drawn from the mouth into the tympanic cavity, where, if it does not readily escape, it may be the cause of inflammation and suppuration of that cavity. At the onset the irregular chills may be taken for irregular intermittent or remittent fever; and such a mistake within my own knowledge, has led to serious mistakes in the management of the cases. The severe un-intermittent character of the pain, its location mainly in one side of the head and especially in the ear,

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with frequently a previous history of otorrhœa, and the local conditions should be sufficient indications to caution one, at least, against the use of measures which might convert a curable disease into a very serious or even fatal case. If there be formation of pus, there will be present some of the principal symptoms of inflammation, sufficient to lead to a careful examination and a correct diagnosis. If there have existed previous attacks, or a chronic otorrhœa, these circumstances would be likely to direct inquiry in the proper channel. The case correctly diagnosticated, prompt and correct treatment is of great importance. The general symptoms must receive attention on general principles, and commensurate to their severity.

Local measures must not be postponed till the general symptoms subside, and the delicate apparatus of the ear is destroyed, just as a rheumatic inflammation of the eye might be treated alone for the rheumatism without reference to the local condition until destruction by adhesion of iris, or ulceration of cornea. In large cities where leeches can be had, they should be applied. But it is useless to mention what cannot be obtained. It only leads to regret of what cannot be avoided.

Anodyne or sedative applications are the means most to be relied upon. Hot applications, medicated or not, as the individual case seems to demand; the moist heat, however, is of almost universal benefit in these cases, and may be applied in the form of woolen cloths wrung out of hot water, or poultices applied over the ear and the side of the head as is most convenient. Warm water may be poured into the ear from a teaspoon, or from a sponge, gradually increasing the temperature of the water as much as can be borne. The syringe, if used at all, needs very careful management, in case of acute symptoms especially, but also at any time. In cases of considerable inflammation, and severe pain, a large blister on the nape of the neck frequently gives marked relief. The above means must be applied according to stage, or degree, or other indications of the case. If there is bulging of the tympanic membrane from the accumulation of pus in the tympanic

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cavity, the greater relief will be afforded by an incision in the membrane, the mode of performing which will be found in all the text-books on the subject. To ascertain whether the membrane is perforated, when inspection cannot be made, the patient may be requested to close the mouth and nose and make an effort at expiration. If there is perforation, air will pass out of the ear, unless the secretions are too abundant or too thick, or granulations fill the opening, that is, of course, supposing the Eustachian tube is pervious. In case of perforation, the warm water and mild astringents will be the proper application. In case of granulations, they must be suppressed; nitrate of silver will be in place. In the former case a solution of one or two grains of sulphate of zinc, or tannin, or alum, to the ounce of water, may be poured into the ear and left a few moments and then removed; or, in the latter condition, the nitrate should be applied by means of a small pledget of cotton, attached to a small probe with point bent at right angles; a solution of from ten to twenty grains may be thus used according to the acuteness of the case, and at the same time counter-irritation back of the ear will be of benefit. I give a few cases to show the importance of attending to them early.

A gentleman spoke to me about a year since of his son, a young man, having occasional trouble with his ear whenever he took cold, saying it discharged somewhat at times. The difficulty had existed for years. I told him he was liable to have a severe attack at any time, and that it would be better to have it attended to, and if possible, cured. He lived some miles from our city. In the latter part of March last, I was called to see the young man in consultation. He had had, three or four days previously, a severe pain in the ear (left), followed by some chilliness and moderate fever. This was followed in the next twenty-four hours by a decided rigor and severe pain in his head, and ear especially. Some little discharge from the ear accompanied these symptoms. I saw him early in the day. The night and previous day had been spent in great pain, only partially relieved by anodynes. Complained

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greatly of the pain in the left side and back part of the head. Pulse full, not rapid; pupils in medium dilatation; vision somewhat obscured; considerable swelling about the ear. After cleansing the external meatus, air could be passed from the Eustachian tube. (I do not give full details of these cases.) I regarded the case as very critical, and the brain as already implicated. Advised warm application to the ear and side of the head; occasionally hot water poured into the ear, and a large blister to be applied to the nape of the neck. As might have been anticipated, the patient grew worse. He died at 9 o'clock, P. M., of the day I saw him.

This may be regarded as an acute attack supervening to a chronic otitis, and as illustrating the danger of these neglected cases.

Another case of sub-acute condition when coming under observation. A professional gentleman came to me during the latter part of last summer with difficulty in his ear (right). Two or three weeks before, he had been diving in the river, and supposed he had taken cold. Inflammation of the ear followed (otitis media). He suffered very much, he said, for a week or more. After the ear began to discharge the pain gradually subsided. I found some discharge. When this was cleared away by the use of syringe and warm water, I found a perforation in the membrane about the size of a large pin-head, through which air could be forced through the Eustachian tube. Its edges were well defined. I applied a weak solution of sulphate of zinc and tannin; washed the ear out every day or second day; gave him directions for his general health which needed attention, and had the pleasure to find the perforation entirely closed in a week, and in a short time his hearing was normal.

Another case, of a more chronic character: A young man about twenty. Had suffered, at times, for some years, with one ear. Recently, the ear had given him much pain after taking a ride in an open buggy. After various domestic applications, the pain subsided somewhat, and as he could not go to an *aurist*, (which was not, and should not be nec-

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essary in nineteen cases out of twenty, if physicians would apply themselves as they might,) he concluded to come to me. I suppose six or eight years infirmary practice might entitle a general practitioner to such a title, if he were sufficiently presumptuous. After cleansing the meatus of secretions and pus, I found the membrane had been almost, if not entirely, destroyed, and the cavity filled with granulations, permitting, however, the air to pass through from the Eustachian tube.

I applied a solution of nitrate of silver, ten grains to one ounce of water, by means of cotton on a probe, gradually increasing the strength of the solution, and applied counter-irritation back of the ear, by means of a compound ætherial tincture of Croton oil and iodine. The granulations were soon suppressed, and hearing improved, though, of course not restored, and all secretion ceased. When apparently well, it is very difficult to persuade patients to continue until entirely well.

Many other cases of this class might be added, illustrative of the *acute*, *subacute* and *chronic* stages of this disease. The above has been my plan of treatment, in general terms, both in hospital, and in private practice, with results almost uniformly satisfactory, when begun in time and faithfully applied.

I wish here to add a notice of a remedy, which has, in a number of cases, given me most gratifying results. We are frequently called upon to prescribe for children with ear-ache, sometimes coming on suddenly in the night, producing great distress, and disturbing the whole household. I have relieved perfectly many cases, by painting around the ear, by means of a camel's hair brush, the *concentrated tincture* of cimicifuga racemosa. The fluid extract does well in many cases, but is not equally efficient with the concentrated tincture. I paint on several coats around and in the ear, letting one coat dry, and then apply another, until I have a drachm, or more, to one ear. I have had children to fall asleep before I left the house, who had been screaming for hours with the

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pain. Sometimes, heat alone will relieve, but I have never applied anything with such satisfaction as this saturated tincture. It is made with strong alcohol, (not dilute,) and as much of the powdered root as the alcohol will fairly cover; macerate for two weeks and filter. It is very valuable as a local anodyne application in many cases of local pain.

This report is submitted for the purpose of enforcing the importance of the curable cases of inflammation of the ear, the details of similar cases being so clearly set forth in the report on otology, made to the Society last year by Dr. F. C. Hotz, of Chicago, to which I can refer the members with confidence. The "Lectures on Aural Catarrh; or, the commonest forms of deafness and their cure," by Peter Allen, of London, contains more information, in the same number of pages, (277, 12mo.) than any other work on the subject of which I have any knowledge.

Dr. N. S. Davis moved that the papers be received and referred to the Committee on Publication. Carried.

Dr. Davis stated that Dr. David Prince, of Jacksonville, had sent the abstract of a paper on "The Employment of a Galvanometer as an aid in Electro-Therapeutics."

On motion of Dr. J. Hollister, it was referred to the Committee on Publication, with power to publish or not, as they thought best.

Dr. N. S. Davis offered the following resolutions:

Resolved, That a Committee of three be appointed by the President to consider the whole plan of organization and practical working of this Society, and report such recommendations for improvement as they may think important, at the next annual meeting.

Resolved, That so much of the President's address as relates to alterations in the constitution, by-laws and practical working of the Society be referred to that committee.

Dr. Davis said the resolutions were offered in order to see whether some means could not be devised to make the meetings more profitable, and to ascertain whether it is necessary, as suggested by the President, to have some additional regulations in regard to admitting and dropping members, etc. The resolutions were adopted.

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Dr. D. W. Graham offered the following:

WHEREAS, At the *twentieth* annual meeting of the American Medical Association, it was

Resolved., That each State Medical Society be requested to prepare an annual register of all the regular practitioners of medicine, in their respective States, giving the names of the colleges in which they may have graduated, and date of diploma, or license, And,

WHEREAS, The objects of the Chicago Medico-Historical Society are "to discover, procure and preserve whatever may relate to the medical history of Chicago and vicinity, and the publication of such information as may be, from time to time, determined upon," and inasmuch as said Society has heretofore published a Medical Register of the State of Illinois and does now publish an annual medical register, of the City of Chicago, Therefore,

Resolved, That the Chicago Medico-Historical Society be hereby requested and authorized to publish an Annual Medical Register of the State of Illinois, iu pursuance of the resolution of the American Medical Assscia tion, together with such other matters pertaining to the medical interests and institutions of the State, as may be deemed proper; and that the officers of all local societies represented in this Society be requested to furnish lists of names and such other information as will assist the editor and the publication committee of the Medico-Historical Society in preparing an accurate and complete Register. *Provided*, that the Illinois State Medical Society shall assume no pecuniary interest or liability in the publication of such Register.

The resolutions were adopted.

The Board of Censors reported the names of Dr. Henry R. Filley, Dr. F. L. Wordsworth and Dr. D. T. Nelson, of Chicago, recommending them for membership. The report was adopted.

On motion of Dr. J. H. Hollister, Dr. J. L. White read the following letter:

CAIRO, ILL., March, 1877.

Dear Doctor: Is there anything really new under the sun? You ask, what now? I have just finished reading from a work by William Beckett, Surgeon, F. R. S., published in 1740, London, the following

"OBSERVATION."

"A young man, of about 21 years of age, endeavoring to lift a heavy weight from the ground, distorted two of the vertebræ of his back towards the right side, externally, so that the acute

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processes formed a small tumor on the part. It was observed, at the same time that the vertebræ slipped out of their places, the person fell prostrate on the ground; nor was he able to rise without assistance. He had been about six months under the care of a sea surgeon, who had made use of external applications, to no purpose, and the first three months, had wholly confined him to his bed, where, by reason of his present disorder, he was obliged to lie constantly in the same posture, with his body contracted, by which means, the two vertebræ which were contiguous to those which were forced from their natural position, were distorted. Soon after the expiration of six months, he was committed to the care of an experienced surgeon, who ordered the patient, every other morning, to be suspended by the neck, by means of such another machine as A. Nuck describes by the name of torques, in his "Operations and Experimenta Chirurgica," in which tract he gives us its figure and use, with its description. Before the patient swung, his back was constantly anointed with the following liniment:

R. Meg. dialtti. nervin. ana. - - ℥ii.
Ol lumbrie. camom ana. - - ℥ss. M.,

while the body of the patient was kept extended by means of the swing, a pair of bodice was laced pretty straight on, to the back part of which there were affixed two small bars of iron, about half a foot long, which were kept about an inch asunder, by means of a bar at each end. These were quilted and covered with soft leather; the two bars were placed on each side the acute processes of the distorted vertebræ, and made a considerable compressure upon the lateral processes. These means being used every other day, in about a month's time, the patient reassumed his former erect stature, and the vertebræ were re-instated in their proper places."

Under the head of remarks, the author gives a very fair description of spinal curvature, now called Potts' disease, and says, "Swinging a person who labors under one of these disorders seems a very commodious method to restore the vertebræ and cartilages to their natural state." * * * *

I suppose you will surely be at Chicago, and at Anna, I hope.

Very truly, H. WARDNER.

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Dr. White moved that it be referred to the Publication Committee, with discretion to use it if they should see fit. Carried.

Dr. Earle read the following resolutions, submitted by Dr. N. S. Davis, which were unanimously adopted:

Resolved, That the thanks of this Society are hereby tendered to the Committee of Arrangements for the excellent preparations made for the accommodation of the Society during its present meeting.

Resolved, That the most cordial thanks of the Society are hereby tendered to the proprietors of the Grand Pacific Hotel for the most liberal and elegant accommodations extended to us, during this anniversary meeting.

Resolved, That the thanks of the Society are cordially extended to the local medical societies and members of the profession in this city for the elegant and most enjoyable entertainment of Wedne day evening.

Resolved, That the thanks of the Society are specially tendered to the representatives of the daily press of this city for the full and accurate reports of our doings during the present annual meeting.

The President appointed on the special committee for the revision of the constitution and by-laws, Drs. N. S. Davis, E. P. Cook and R. G. Bogue.

And on motion of Dr. Davis, Dr. T. D. Fitch was added to the committee.

The Board of Censors reported favorably in regard to the following named persons, who were proposed for membership:

Dr. Hatch, New Salem.	Dr. G. M. Chamberlain, Chicago.
Dr. G. E. Willard, Chicago,	Dr. Wadsworth, "
Dr. J. H. Bates. "	Dr. Henrotin, "
Dr. L. R. Williams, "	Dr. J. T. Everett, Sterling,

Dr. Henry R. Filley, Prairieville.

The gentlemen were all elected members.

There being no evidence to sustain charges preferred against the Jersey County Medical Society, we would recommend that the charges be dismissed.

E. INGALS,
E. WENGER,
J. L. WHITE.

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On motion of Dr. N. S. Davis, the Society proceeded to elect delegates to represent the Illinois State Medical Society in the National and several State society meetings, as follows:

Delegates to National Society:

N. S. Davis, Chicago,
M. W. Seaman, Shipman,
F. N. Boe, Loda,
J. L. White, Bloomington,
C. Hunt, Dixon,
E. P. Cook, Mendota,
A. Hard, Aurora,
B. M. Griffith, Springfield,
Sarah H. Stevenson, Chicago,
P. M. Barton, Danville,
M. W. Walton, Ridot,
J. J. Reaburn, Denver,
C. W. Chaffiee, Chicago,
J. P. Matthews, Carlinville.
W. M. Chambers, Charleston,
Robert Beal, Peoria,
D. S. Jenks, Plano,
Lucius Clark, Rockford,
W. H. McNairy, Martinville,
C. DuHadbury, Jerseyville,
J. S. Williams, Otterville,
E. R. Willard, Wilmington,
T. D. Washburn, Hillsboro,
L. R. Williams, Chicago,
J. S. Jewell, Chicago,
Moses Gunn, Chicago,
Edwin Powell, Chicago,
T. F. Worrell, Bloomington.

Delegates to neighboring State Societies:

Iowa, B. F. Crummer,
" J. J. Reaburn,
Ohio, L. H. Montgomery,
Michigan, Chas. Lovewell,
" F. M. Wilder,
New York, O. W. Moon,
Indiana, W. L. Gooddell.

The President.—I desire to thank you for this pleasant session, and for the uniform kindness and co-operation which you have rendered me, during the session. There has not been a single thing to ruffle our temper or disturb our happiness, with one exception, and I regret that as much as any one. I thank you that you have been universally kind and forbearing with me in the conducting of the business of this session. Although I have been for 9 years connected with the Society officially, I now retire from all official connection with it, but promise you I will not retire from work and interest in your future labors. Wishing you a greater degree of prosperity in the future than in the past, I thank you.

On motion of Dr. J. H. Hollister, the Society adjourned.

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THE BANQUET.

On Wednesday evening the members of the State Society, and invited guests, assembled in the Grand Pacific Hotel and partook of an elegant entertainment tendered by the Chicago Medical Society, and the Society of Physicians and Surgeons, acting in concert. Dr. J. N. Hyde, Chairman of the Committee of Arrangments, presided, and Rev. S. F. Harris, Rector of St. James' Church, acted as Chaplain. The tables were loaded with an abundance, served in excellent style, but were entirely free from all intoxicating beverages. The large dining hall was well filled with a very happy company, and made more cheerful by an excellent band of music. At the proper time the presiding officer opened the intellectual part of the programme with some pertinent remarks, and called upon Dr. E. Ingals to respond to the following sentiment: "The Medical Profession"—which he did in a pleasant and entertaining manner.

Judge J. G. Rogers, of the Circuit Court, was next called upon as a representative of the legal profession, and responded in a very appropriate and interesting address.

The Chairman next called upon Dr. Charles G. Smith to respond in behalf of the "Western Physician," which he did in a humorous, entertaining style. The Rev. Dr. S. F. Harris then favored the company with an excellent and instructive address, as the representative of the clergy. Drs. E. W. Sawyer, T. F. Worrell, T. D. Fitch, J. Adams Allen, M. Gunn, W. H. Byford, J. S. Jewell, and N. S. Davis, were successively called, and each contributed to the interest and enjoyment of the occasion by an appropriate response. Dr. Thomas Bevan then offered the following resolution, which was adopted with enthusiasm:

Resolved, That the State Medical Society heartily appreciates the courtesy and attention shown to its members by their munificent hosts, Messrs. John B. Drake & Co., of the Grand Pacific Hotel, in furnishing a place for their meeting, and the delightful and satisfactory manner in which they have prepared and served this banquet; and we hereby tender them our most heartfelt thanks.

After a few words of congratulation from Dr. Hyde, the banquet came to an end. The occasion was one which will greatly promote social friendship, and professional harmony, and will long be remembered with pleasure by all who were present.

N. S. Davis, *Secretary.*
C. W. Earle, *Assistant Secretary.*

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LIST OF MEMBERS

OF THE

ILLINOIS STATE MEDICAL SOCIETY.

* Indicates those who have paid the annual dues for the current year.

NAME.	POST-OFFICE.	COUNTY.
Adams, J. C.	Gridley,	McLean.
Armstrong, C.	Carrollton,	Greene.
* Andrews, E.	Chicago,	Cook.
* Allen, J. Adams	"	"
* Adolphus, Philip	"	"
Allen, G. T.	St. Louis,	St. Louis, Mo.
* Albin, G. W.	Neoga,	Cumberland.
Akin, J. H.	Glassford,	Peoria.
* Allen, C. C.	Chillicothe,	"
* Avery, S. J.	Chicago,	Cook.
Alvis, D. H.	Galva,	Henry.
* Birney, S. H.	Urbana,	Champaign.
Bernhardi, C.	Rock Island,	Rock Island.
* Byford, W. H.	Chicago,	Cook.
* Bevan, Thomas	"	"
Breed, S. P.	Princeton,	Bureau.
Bennett, J. D.	Assumption,	Christian.
Blalock, N. G.	Mount Zion,	Macon.
* Bogue, R. G.	Chicago,	Cook.
Boue, T. N.	Loda,	Iroquois.
* Buck, H. B.	Springfield,	Sangamon.

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NAME.	POST-OFFICE.	COUNTY.
Baker, L. H.	Payson,	Adams.
Burbank, W. M.	Barrington,	McDonough.
* Bardwell, G. Allen	Dixon,	Lee.
* Boal, R.	Peoria,	Peoria.
Blackman, F. H.	Geneva,	Kane.
* Barnett, C. F.	Bunker Hill,	Macoupin.
Burton, J. W.	Saybrook,	McLean.
* Blake, S. C.	Chicago,	Cook.
Bridge, N.	"	"
Barton, Ira	Raymond,	Montgomery.
* Bartlett, A. T.	Virden,	Macoupin.
Briggs, R.	Clayton,	Adams.
* Barger, R. N.	Hopedale,	Tazewell.
Brenton, W.	Tuscola,	Douglas.
Baum, Z. T.	Paris,	Edgar.
Blanchard, Enoch	Minonk,	Woodford.
* Barton, P. H.	Danville,	Vermilion.
* Bannister, H. M.	Evanston,	Cook.
* Bluthardt, T. J.	Chicago,	"
* Brower ,D. R.	"	"
* Booth, D. S.	Sparta,	Randolph.
Culver, B. G.	Greenfield,	Greene.
Corr, A. C.	Chesterfield,	Macoupin.
* Curtiss, J. T.	Otter Creek,	Jersey.
Crist, H. C.	Bloomington,	McLean.
* Cook, E. P.	Mendota,	LaSalle.
Crist, D. O.	Bloomington,	McLean.
Chambers, W. M.	Charleston,	Coles.
Clarke, H. N.	Niantic,	Macon.
* Clarke, Lucius	Rockford,	Winnebago.
Crawford, S. K.	Monmouth,	Warren.
Corbus, J. R.	LaSalle,	LaSalle.
Crossley, G. W.	Princeton,	Bureau.
Cochran, G. W.	Farmer City,	DeWitt.
Cole, F.	El Paso,	Woodford.
Cole, N. B.	Bloomington,	McLean.
* Corcoran, G. L.	Brimfield,	Peoria.
Craig, G. G.	Rock Island,	Rock Island.

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* Cozad, J.	Andalusia,	Rock Island.
Chaffee, C. W.	Chicago,	Cook.
Crane, O. P.	Mason City,	Mason.
Cowan, R. S.	Girard,	Macoupin.
* Curtis, L.	Chicago,	Cook.
* Clarke, W. E.	"	"
Caldwell, W. S.	Warren,	Jo Daviess.
*Crothers, R. W.	Delavan,	Tazewell.
Cole, W. C.	Lynnville,	Morgan.
Cox, G. W.	Clayton,	Adams.
* Culbertson, S. D.	Piper City,	Ford.
* Church, Rita B.	Canton,	Fulton.
* Corr, Lucinda H.	Carlinville,	Macoupin.
Carr, C. R.	Bloomington,	McLean.
* Chenoweth, C.	Decatur,	Macon.
* Collett, Thos.	Lovington,	Moultrie.
Chapman, W. H.	Peoria,	Peoria.
Callaway, Geo.	Tuscola,	Douglas.
Crummer, B. F.	Warren,	Jo Daviess.
* Cooper, C. N.	Batavia,	Kane.
* Davis, J. M.	Carrollton,	Greene.
Davis, T. W.	Wapella,	DeWitt.
Douglas, D. T.	Selma,	McLean.
David, C. A.	Northville,	LaSalle.
* Davis, N. S.	Chicago,	Cook.
Dunn, L. D,	Tiskilwa,	Bureau.
Davison, J. B.	Moline,	Rock Island.
* Davis, F. H.	Chicago,	Cook.
Dieffenbacher, P. L.	Havana,	Mason.
DeWolf, O. C.	Chicago,	Cook.
Dyer, R. F.	Ottawa,	LaSalle.
*Darrah, A. T.	Tolono,	Champaign.
* Dora, J. T.	Mattoon,	Coles.
Deming, H. H.	Pana,	Christian.
Du Hadway, C.	Jerseyville,	Jersey.
* Dexter, Ransom	Chicago,	Cook.
Ensign, W. O.	New Rutland,	LaSalle.
* Earle, C. W.	Chicago,	Cook.

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Everett, O.	Dixon,	Lee.
Etheridge, J. A.	Chicago,	Cook.
Elder, Wm. A.	Bloomington,	McLean.
* Emmons, F. A.	Chicago,	Cook.
*Engert, Rosa H.	"	"
Fisher, J. B.	"	"
* Fisher, T. D.	Leroy,	McLean.
* Fitch, T. Davis	Chicago,	Cook.
* Fink, J. W.	Hillsborough,	Montgomery.
* Fenn, C. T.	Chicago,	Cook.
Fredigke, J. G.	"	"
* Foote, D. E.	Belvidere,	Boone.
* Felker, J. B.	Amboy,	Lee.
* Fisher, A.	Chicago,	Cook.
Frazier, J. V.	Viola,	Mercer.
Fisher, Clinton	Jacksonville,	Morgan.
Fugate, J. T.	Urbana,	Champaign.
* Fitch, C. M.	Chicago,	Cook.
* Fitch. W. H.	Rockford,	Winnebago.
* Foster, A. H.	Chicago,	Cook.
* Filley, H. R.	Brimfield,	Peoria.
* Goodbrake, C.	Clinton,	DeWitt.
* Gunn, Moses	Chicago,	Cook.
* Galt, Thomas	Rock Island,	Rock Island.
Gregory, J.	Farmington,	Fulton.
Gregg, P.	Rock Island,	Rock Island.
* Gray, E. W.	Bloomington,	McLean.
Gill. C. J.	Oak Grove,	"
* Graham, D. W.	Chicago,	Cook.
Gaylord, E.	Magnolia,	Putnam.
* Goodell, W. L.	Effingham,	Effingham.
* Griffith, B. M.	Springfield,	Sangamon.
* Garretson, P. H.	Macomb,	McDonough.
Goodwin, W. M.	Urbana,	Champaign.
* Gill, H. Z.	Jerseyville,	Jersey.
* Goodwin, A. E.	Rockford,	Winnebago.
* Garrott, E.	Chicago,	Cook.
Haering, T. T.	Bloomington,	McLean.

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NAME.	POST-OFFICE.	COUNTY.
* Haller, F. B.	Vandalia,	Fayette.
* Hollister, J. H.	Chicago,	Cook.
* Holmes, E. L.	"	"
* Hurlburt, V. L.	"	"
* Hamill, R. C.	"	"
Higgins, R. T.	Vandalia,	Fayette.
* Hamilton, J. O.	Jerseyville,	Jersey.
* Hurd, H. S.	Galesburg,	Knox.
Holderness, E.	Towanda,	McLean.
Hutchinson, J. M.	Chicago,	Cook.
* Hard, Abner,	Aurora,	Kane.
* Hunt, C. C.	Dixon,	Lee.
Hamilton, J. L.	Peoria,	Peoria.
* Hewitt, G. W.	Franklin Grove,	Lee.
Hamilton, J. B.	Kane,	Green.
* Hawley, S. B.	Aurora,	Kane.
Hill, Wm.	Bloomington,	McLean.
* Herriott E. L.	Grafton,	Jersey.
* Hayes, P. S.	Chicago,	Cook.
Hyde, J. N.	"	"
Hempstead, C. W.	"	"
* Haskell, W. A.	Alcon,	Madison.
Hurst, N. N.	Streator,	LaSalle.
* Hays, J. L.	Paris,	Edgar.
Hess, T. M.	Homer,	Champaign.
Huddleston, R. H.	Champaign,	"
* Hotz, F. C.	Chicago,	Cook.
* Howard, H. C.	Champaign,	Champaign.
* Harris, W. J.	Piasa,	Macoupin.
* Hatch, H.	New Salem,	Pike.
* Hooper, H.	Chicago,	Cook.
* Hall, R. S.	"	"
* Ingals, E.	"	"
* Ingals, E. F.	"	"
Isham, R. N.	"	"
* Ingersoll, Ellen A.	Canton,	Fulton.
* Johnson, H. A.	Chicago,	Cook.
Jones, H. W.	"	"

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NAME.	POST-OFFICE.	COUNTY.
* Jewell, J. S.	Evanston,	Cook.
* Jenks, D. S.	Plano,	Kendall.
* Jones, S. J.	Chicago,	Cook.
Jones, G. W.	Danville,	Vermilion.
* Jackson, A. Reeves	Chicago,	Cook.
Johnson, Chas. B.	Tolono,	Champaign.
Johnston, J. P.	Jacksonville,	Morgan.
Jones, H. K.	"	"
* Jacobson, S. D.	Chicago,	Cook.
Knox, W. A.	"	"
* Kitchen, J. L.	Wyanett,	Bureau.
Kimber, A. C.	Waverly,	Morgan.
* Kaull, W. M.	Limerick,	Bureau.
* Kinnear, A. H.	Metamora,	Woodford.
* Kendall, H. W.	Quincy,	Adams.
* Kent, A. P.	Chicago,	Cook.
* Kratz, E. H.	Champaign,	Champaign.
* Little, Jehu	Bloomington,	McLean.
Lucas, C. J.	Jacksonville,	Morgan.
Lyman, W. C.	Chicago,	Cook.
* Littlefield, H. H.	Beardston,	Cass.
* Lichty, Daniel,	Rochelle,	Ogle.
Lyford, W. H.	Port Byron,	Rock Island.
Luce, H. C.	Bloomington,	McLean.
Luce, A. H.	"	"
Lamme, D. W.	El Paso,	Woodford.
* Lester, G. B.	Oswego,	Kendall.
* Leonard, R. L.	Chicago,	Cook.
* Lord, F. H.	Plano,	Kendall.
Lichtenberger, C. T.	Eureka,	Woodford.
* Lee, E. W.	Chicago,	Cook.
* Lovell, C. H.	Englewood,	"
McKowan, J. M.	Arcola,	Douglass.
Moore, D. O.	Bloomington,	McLean.
McVey, R. E.	Waverly,	Morgan.
McFarland, A.	Jacksonville,	"
McArthur, A. L.	Rockford.	Winnebago.
* McWilliams, S. A.	Chicago,	Cook.

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NAME.	POST-OFFICE.	COUNTY.
Miller, DeLaskie,	Chicago.	Cook.
* Matthews, J. P.	Carlinville,	Macoupin.
* Mileham, S.	Camp Point,	Adams.
Mills, C. H.	Champaign,	Champaign.
Marguerat, E.	Chicago,	Cook.
* Miller, T. W.	"	"
* McClelland, M. A.	Knoxville,	Knox.
* Mosher, J. H.	Prophetstown,	Whiteside.
* Martin, H.	Canton,	Fulton.
* McMann, W. W.	Gardiner,	Grundy.
* Moore, O. W.	Braceville,	"
* Merriman, H. P.	Chicago,	Cook.
Maxwell, T. J.	Olena,	Henderson.
Monroe, G. J.	Leland,	LaSalle.
Montgomery, L. H.	Chicago,	Cook.
*McKinney, J. G.	Barry,	Pike.
Miller, G. W.	Woodson,	Morgan.
Massie, Wm.	Grand View,	Edgar.
Mandeville, John,	Philo,	Champaign.
* Mitchell, R. J.	Girard,	Macoupin.
McClure, D. P.	Rantoul,	Champaign.
Miles, M.	Undustrial University,	"
* MacDonald. P. S.	Chicago,	Cook.
* McNary, W. H.	Martinville,	Clark.
* Montgomery, W. T.	Chicago,	Cook.
* Marshall, F. D.	"	"
Niglas, J. N.	Peoria,	Peoria.
Nance, H.	Kewanee,	Henry.
* Nelson, D. T.	Chicago,	Cook.
Orner, C. T.	Saybrook,	McLean.
*Owens, J. E.	Chicago,	Cook.
*Peirce, W. P.	Lemont,	Cook.
Pollock, W. L.	Heyworth,	McLean.
Patterson, N.	Ellsworth,	"
*Prince, D.	Jacksonville,	Morgan.
*Parke, C. R.	Bloomington,	McLean.
Patterson, A. A.	Curran,	Sangamon.
*Powell, E.	Chicago,	Cook.

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NAME.	POST-OFFICE.	COUNTY.
*Patterson, R. J.	Batavia,	Kane.
Plummer, S. C.	Rock Island,	Rock Island.
Pitner, J. T.	Jacksonville,	Morgan.
Polk, J. L.	Arcola,	Douglas.
Plummer, T. R.	Trivoli,	Peoria.
Paoli, G. C.	Chicago,	Cook.
Pearman, J. T.	Champaign,	Champaign.
Parkes, C. T.	Chicago,	Cook.
*Parsons, Wm.	"	"
Penniman, A. B.	Woodburn,	Macoupin.
Pope, C. T.	Thomasborough,	Champaign.
*Park, Roswell	"	"
Quine, Wm. E.	Chicago,	Cook.
Ralston, W. H.	Normal,	McLean.
*Rankin, A. C.	Loda,	Iroquois.
Ross, J. P.	Chicago,	Cook.
Ross, J. C.	Lincoln,	Logan.
*Rauch, J. H.	Chicago,	Cook.
*Reeder, I. H.	Lacon,	Marshall.
*Reed, N. S.	Chandlerville,	Cass.
*Roskoten, R.	Peoria,	Peoria.
*Robinson, F. C.	Wyanet,	Bureau.
*Rood, J. B.	Lemont,	Cook.
Reece, M.	Abingdon,	Knox.
Rockwell, C. V.	Taylorville,	Christian.
Robbins, M. M.	Aurora,	Kane.
*Ransom, W. L.	Roscoe,	Winnebago.
Richardson, A. W.	Ohio,	Bureau.
Reed, W. L.	Cerro Gordo,	Piatt.
Reynolds, A.	El Paso,	Woodford.
*Reaburn, J. J.	Denver,	Hancock,
*Ritchey, S. O.	Chicago,	Cook.
Steele, D. A. K.	Chicago,	Cook.
*Skinner, J. T.	Peoria,	Peoria.
*Secrist, C.	Watseka,	Iroquois.
*Smiley, J. C.	Kewanee,	Henry.
*Smith, C. G.	Chicago,	Cook.
*Steele, J. M.	Grand View,	Edgar.

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*Simon, C. P.	Chicago,	Cook.
*Stillians, D. C.	"	"
Stokes, H. A.	Chebanse,	Iroquois.
Simmons, C. J.	Chicago,	Cook.
Stevenson, Sarah H.	"	"
*Seaman, M. W.	Shipman,	Macoupin.
*Stewart, T. N.	Riggston,	Scott.
Skinner, B. H.	Meritt,	"
*Spear, J. W.	Mason City,	Mason.
Slater, L. B.	Taylorville,	Christian.
Steele, A. F.	Ashmore,	Coles.
Sparling, Wm. H.	Moweaqua,	Shelby.
*Seeley, T. P.	Chicago,	Cook.
*Shaw, Eliza A.	Bloomington.	McLean.
*Travers, E. R.	Amboy,	Lee.
*Tyree, W. A.	Wapella,	DeWitt.
Thomas, J. F.	Princeton,	Bureau.
*Truesdale, C.	Rock Island,	Rook Island.
*Thompson, A. H.	Princeton,	Bureau.
Tibbitts, L.	Dallas City,	Hancock.
*Thompson, L. G.	Lacon,	Marshall.
*Tope, J. W.	Jefferson,	Cook.
*Thompson, Mary H.	Chicago,	"
Townsend, Justus	Springfield,	Sangamon.
*Todd, J. F.	Galva,	Henry.
*Taylor, C. S.	Rockton.	Winnebago.
*Vosburgh, D. M.	Earlsville,	LaSalle.
Van Horne, A. K.	Jerseyville.	Jersey.
*Veatch, W. H.	Roodhouse,	Green.
Van Dyke, J.	Ashmore,	Coles.
*Wenger, E.	Gilman,	Iroquois.
*Whitmire, J. S.	Metamora,	Woodford.
*Wright, J.	Clinton,	DeWitt.
*Worrell, T. F.	Bloomington,	McLean.
*White, J. L.	"	"
*Washburn, T. D.	Hillsborough,	Montgomery.
*Walker, J. P.	Mason City,	Mason.
*Wilbur, C. T.	Lincoln,	Logan.

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*Willard, E. R.	Wilmington,	Will.
Ware, L.	Chicago,	Cook.
*Walton, M. W.	Ridotte,	Stephenson.
Wright, G. W.	Canton,	Fulton.
Winney, C.	Sandwich,	DeKalb.
*Wells, J. M. R.	Geneseo,	Henry.
*Webster, J. R.	Monmouth,	Warren.
*Wilder, F. M.	Chicago,	Cook.
Waters, J. W.	Lexington,	McLean.
*Walton, Jane E.	Chicago,	Cook.
*Wilder, E. P. B.	"	"
*Whitten, T. J.	Irving,	Montgomery.
*Wilson, R. M.	Lincoln,	Logan.
*Wright, Nehemiah	Chatham,	Sangamon.
West, J. M.	Springfield,	"
*Wing, E. D.	Jacksonville,	Morgan.
*Wood, D. L.	Streator,	LaSalle.
*Williams, J. S.	Otterville,	Edgar.
*Walker, J. R.	Cutler,	Perry.
*Whitcomb, A. L.	Onarga,	Iroquois.
*Williams, L. R.	Chicago,	Cook.
*Williard, G. E.	"	"
*Whitmire, J. W.	Metamora,	Woodford.
Webster, J. C.	Chicago,	Cook.
Zearing, J. R.	Woodford,	Woodford.
Ziller, J. G.	"	"

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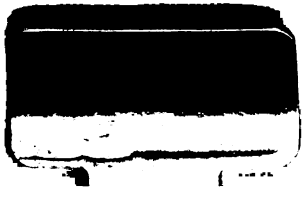

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